

modern AQUARIUM



September 2022
volume XXIX
number 7

Greater City Aquarium Society - New York

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Series III Vol. XXIX, No. 7 September, 2022

ON THE COVER

Our cover this month shows a group of *Neolamprologus brichardi*, a beautiful cichlid from Lake Tanganyika. For more information on keeping and breeding this striking fish, see Joe Ferdenzi's article on page 11.

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THE EDITOR'S BABBLENEST



A guest editorial from a former
Editor: Alexander Priest

Unless you joined the Greater City Aquarium Society before 1998, and have a very good memory, the graphic above, and the title of this article (“The Editor’s Babblenest”) may be new to you.

Let me introduce myself, I am the second Editor of **Modern Aquarium**, Series III, taking over from Warren Feuer in 1998 and handing that job to Dan Radebaugh from 2008 onward.

For his editorials, Warren used a graphic of a fish blowing a bubble from within a cup. Dan, our current Editor, uses a graphic of a tied-up man under water.



As someone who sat in the Editor’s chair for some years, I can relate to Dan’s graphic, as sometimes I felt like someone thrown overboard!

Since I was on the Board of the International Anabantoid Association and Vice-President of the American Labyrinth Fish Association (neither of which are still active), I took what may be the most well-known anabantoid, a *Betta splendens*, for my editorials. It also labeled me as an official “air head!”

While I was Editor, the print-shop we were using became unavailable. Jason Kerner found one willing to meet our unique needs (front and back pages in cardboard stock, inside pages on standard paper stock, back to back printing, collated, and bound). Color printing would have been too costly, so Jason color printed the front page photo, with multiple images on a page. He then cut and hand pasted the images on every cover!

I would print one copy of the entire issue (less the cover photo), meet Jason on a subway platform before each of us had to go to work, and hand him a folder with the pages which he took to the printer. He then picked up the finished issue to bring to a meeting. Ever since the events of 9/11/2001, terrorism has been on the radar of many, and my wife had several times commented that my handing over a folder in a subway platform might look suspicious. Fortunately, Homeland Security took no notice of our activities.

Black and white photos of tropical fish do not do them credit. We had to wait until Dan became Editor before we could have inside color—with one notable exception: the Ladies’ Issue.

One of the things I did as Editor was some “theme” issues. Among them, a “Ladies Issue” with color on every page, because I had an HP Color LaserJet printer (my wife referred to it as the “refrigerator in the livingroom” as it was as large as a college dorm refrigerator). The printer ran 24 hours+ for that issue, but it was worth it.

The 100th issue of **Modern Aquarium**, (Series III) was our “Hints and Tips” theme issue, featuring 100 hints and tips, all from our own members!

Another theme issue was December 1998’s “Around the World.” It was a “killer” to do, especially creating the front cover (a collage of postage stamps from all over the world, all featuring fish).

There was a “Lazy Man’s” issue. If I had to do it again, nowadays it would likely be just the “Lazy Issue.” Political correctness and all that, you know.

I regret not being able to do a kid’s issue, but just not enough kids into the hobby (or at least as GCAS members), and that’s a shame.





GCAS Programs

2022

March 2	Scott Dowd <i>Project Piaba</i>
April 6	Rosario LaCorte <i>Images From A Lifetime of Fish Breeding</i>
May 4	Warren Feuer <i>Shell Dwelling Cichlids</i>
June 1	Dr. Enea Parimbelli <i>Voyage in Lake Tanganyika</i>
July 6	Joseph F. Gurrado <i>Reef Keeping</i>
August 3	A Night at the Auction
September 7	Andreas Tanke <i>Plecocos of the Rio Xingu</i>
October 7	Gala Buffet Dinner <i>Douglaston Manor</i>
November 2	TBA <i>TBD</i>
December 7	Mark Soberman <i>Corydoras catfish</i>

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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 to 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

Most of us don't make it to the 100 year mark. We are as old as flight: The Wright Brothers, 1903. We are older than the mouse (Mickey, that is -- 1928)! The Lincoln Memorial is also only 100 years old! So do you want to miss our shin-dig? The thing we call the Gala Party is nearly upon us! Be sure to get your order in right away! There will be no tickets sold at the door! As Elvis used to sing, "It's Now or Never!"

In the good old days magic did exist. It could save kingdoms or clear a drain in a castle. Today we find magic or illusions in theaters, and the magic carpet on which you could fly away from all your troubles is now reduced to a drone delivering pizza. Magic has faded, and it is cheaper to buy drain cleaner than to hire a magician. Wouldn't it be great to bring some of it back, so that you could be instantly transported to a remote part of the world, collect some rare fish and return in no time, unharmed, and be able to gaze at them in your fish tanks? Tempting thought, eh?

Well, the above scenario may just be wishful thinking, but the good part is that these days you can get many wonderful fish in a local pet store, particularly here in NYC, and with airmail delivery you can get them from many reputable sources! Being able to afford it is the new magic, along with all the amazing things we now take for granted – express shipping from practically anywhere in the world!



Horst

The advertisement for The Museum of Aquarium & Pet History (moaph.org) features a central title in a decorative font. Below the title are several illustrations: a parrot on the left, a fishbowl with two fish, a dog, and a child with a fish. The text below the illustrations reads: "If you like history, and you like pets, then this is the place for you. Dedicated to the history of aquarium & pet keeping, The Museum of Aquarium & Pet History includes a huge depository of over 3,000 items all focused on the pet industry. From antique fish bowls, aquariums and cages, to foods, medications, books and advertising signs, we've got it all! To learn more about this amazing collection of historical pet artifacts, please visit our website: moaph.org".

<https://moaph.org/>



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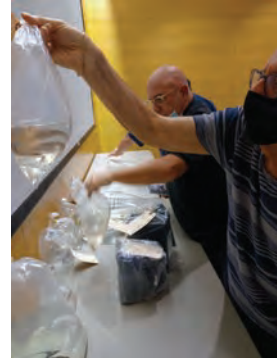
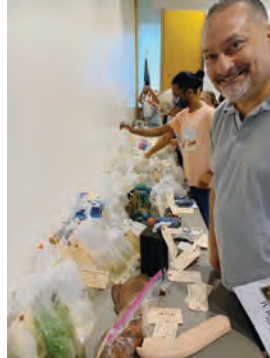
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Pictures From Our Last Meeting

Photos by Leonard Ramroop



Above: Ron Kasman, Lonnie Goldman, Richie Waizman et al peruse some of the night's auction offerings.

Below: Harry Faustmann and Tony Siano conjure captions for contest and await speaker.



Pete d'Orio tells it like it was.



S e b a s t i a n Alvarado and his junior aquarists.





Come join us at the
Greater City Aquarium Society's

100th Anniversary Gala!

Friday, October 7th, 2022 7:30 PM

at

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An Aquarist's Journey

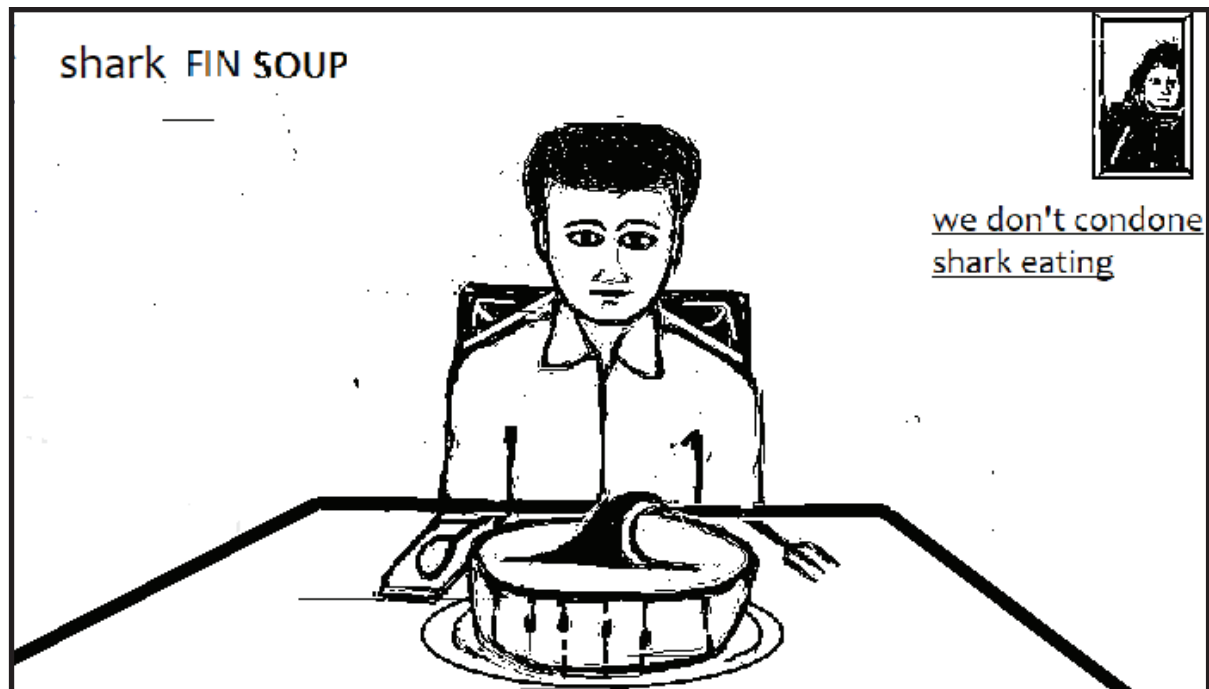
Rosario La Corte is one of the world's leading authorities on breeding fish and he has written numerous articles and books, contributing greatly to our understanding of fish and their habits.

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



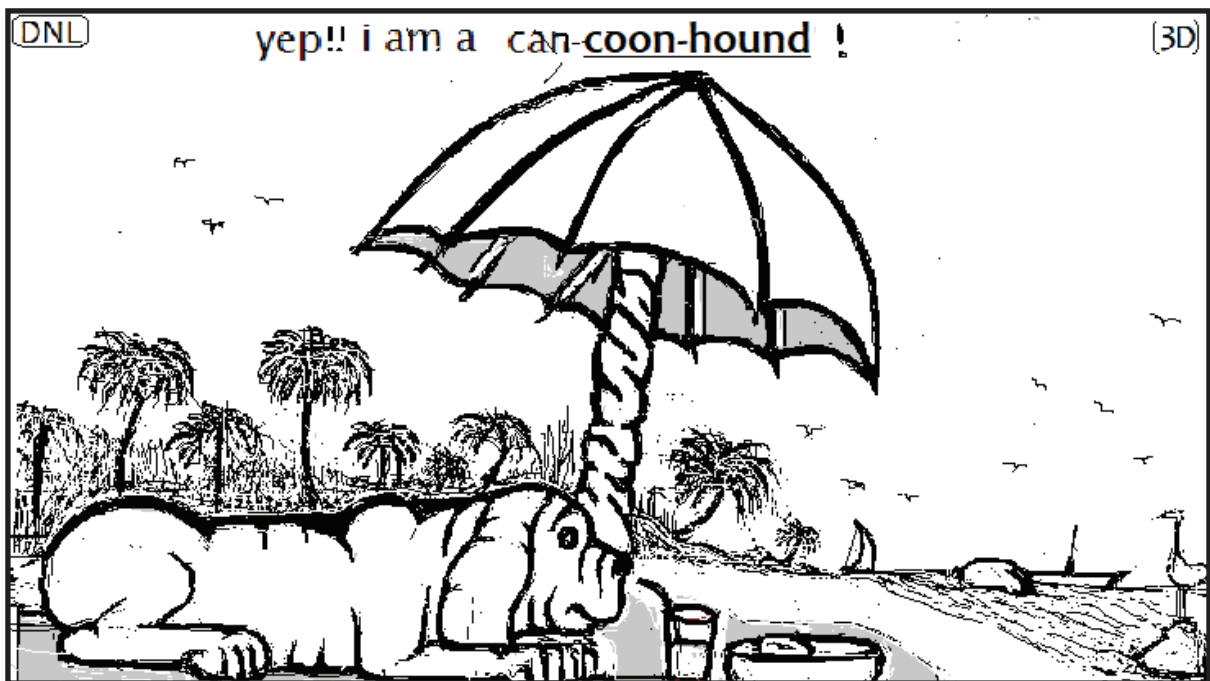
August's Caption Winner: Alexander A. Priest



Where are my Oyster Crackers?

The Modern Aquarium Cartoon Caption Contest

*Modern Aquarium has featured cartoon contests before, and they're back! You, the members of Greater City get to choose the caption! Just think of a good caption, then mail, email, or phone the Editor with your caption (phone:347)866)1107, fax: 877)299)0522, email: gcas@earthlink.net. **Your caption needs to reach the Editor by the third Wednesday of this month.** We'll also hand out copies of this page at the meeting, which you may turn in to Marsha or Dan before leaving. Winning captions will earn ten points in our Author Awards program, qualifying you for participation in our special "Authors Only" raffle at our Holiday Party and Banquet. Put on your thinking caps!*



Your Caption:

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Buckets of Brichardi

by Joseph Ferdenzi

Some fish find it difficult to spawn in the home aquarium. Some don't. This story is about one of the latter.

The story begins some ten years ago. My cousin and fellow GCAS member John Buzzetti had a tank with a large and growing colony of *Neolamprologus brichardi*, a fish I had worked with many years earlier. It is a beautiful cichlid from Lake Tanganyika. It is not the most colorful of fish—basically beige, although some fins have white edging, and there is a bright yellow spot on the gill cover. What makes this fish so appealing is its finnage, especially its lyre-shaped caudal fin.



John was more than happy to give me a group of over a dozen that were in the 2 to 3 inch range, not including the caudal. So they are a good-sized fish, but certainly are not giants.

It happened that I had an empty 75 gallon tank, and into it they went. Brichardi are very hardy fish. They eat just about anything. Their water should be alkaline and in the 72° to 75° F range, but that's about it. In all the years I've kept them I have never had to medicate their tank. They are basically bulletproof.

While *brichardi* can be kept in a community aquarium, they make for a wonderful display all on their own. They are one of the few Lake Tanganyika cichlids that will form a community of adults and juveniles that tolerate each other and will spawn readily in this communal arrangement. While the fish take several years to reach breeding maturity, once they do you will have buckets of fry.

In fact, in my 75 gallon tank right now there are three contemporaneous spawns. Each spawning site has 50 or more fry guarded by adults and juveniles. The spawning sites are depressions dug into the gravel next to a rock or group of rocks. (On occasion however, I have also seen them lay eggs in depressions in some of the large pieces of driftwood.)

The fry will eat finely crushed flake food, newly hatched brine shrimp, or peck away at fish food tablets. They can be left in the tank where a number (but not all) will grow to be adults. If you want to ensure that almost all survive, however, it is best to remove them to their own tank. The easiest way I have found for removing the fry is to do so when they are only a week or so old, because they are still in a huddled mass at their spawning site and can be siphoned out using a large diameter (½" to ¾") hose. Syphon them into a 2 or 5 gallon bucket. From there they can be transferred to a grow-out tank of the same pH and temperature as their original tank.

In their own tank the fry are easily fed because they have no competition for the food. They grow slowly, but they grow. Again, disease is unheard of, so no worries there.

Use as large a grow-out tank as possible. I recommend at least a 20 gallon tank, but a 40 would be even better. It all depends on how many fry you want to raise. You see, if you have a large colony of adults (I have about two dozen) you will get multiple spawns on an almost monthly basis. There is no way to raise





that many fry unless you have many large grow-out tanks. Few of us can devote that much space to one species. I can't, therefore I only syphon out a spawn when my grow-out tank (which alternates between a 30 gallon tank and half of a 40 gallon tank) is empty.

If you are looking for a beautiful, easy-to-care-for cichlid that will produce buckets of fry, this is a fish you may want to try. I know that for me, it is one of my favorite fish!



Tonight's Speaker: September 7, 2022

Andreas Tanke

The subject of Andreas' talk tonight is **Plecocos of the Rio Xingu.**



At about 10 years old, I got my first aquarium and started to gain experience with this exciting hobby. In the 1970s, due to my studies in mathematics / computer science and the founding of my IT company, other things came to the fore. However, I returned to the aquarium in 2002.

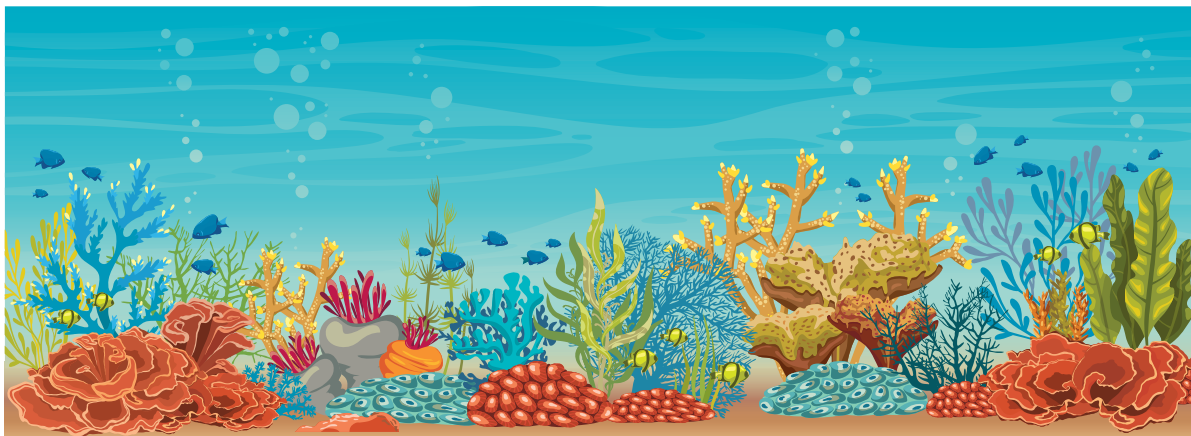
I have been a member of the German Cichlid Society (DCG), the VDA Zwergcichliden (AKZ) and the International Community Barben Schmerlen-Salmier-Weise (IG BSSW), or their predecessor, the BSSW working group in the VDA.

My interests are clearly in the underwater fauna of the South American continent, especially in the dwarf cichlids of the genus *Apistogramma* and the Loricarids. In the meantime, I have cared for more than 25 different *Apistogramma* species. My biggest passion however, are the catfish and especially the genus *Panaqolus*, of which I currently have about 10 species.



My Life With Fish (5) and Other Children

by Jason Gold



In the summer of 1984, between my second and third years of architecture school, my girlfriend and I finally got our very own one-bedroom apartment. We'd already been living together for two years, but that was in a two-bedroom, with another roommate in the second bedroom—first my best friend from college (who would eventually be the best man at our eventual wedding), then my best friend from architecture school (who would be an usher). But now, after one year of dating and two more living with roommates, it was just us. We were thrilled with our new apartment, the back half of the parlor floor of a townhouse on West 87th between Columbus and Amsterdam.

To celebrate, my fish got a new home too, upgrading from a 20H to a 75-gallon tank, the centerpiece of our new living room. My first Eheim canister filter, too. When the guys from Crystal Aquarium, the fantastic and sorely missed store at 93rd & 3rd, delivered the tank and everything else I needed for the set-up, it felt like a new world of possibility. I had never before had such a broad canvas on which to paint my vision of aquatic Nirvana. I'd recently bred my silver-tip tetras and had a whole swarm of young fish, about fifty of them, still small but crowded in their five-gallon nursery tank. When I released them into their new digs and they joined their parents to school merrily through their new home, it was as though I were seeing a slice of the Amazon itself. OK, so they're not actually from the Amazon, they're from the Rio São Francisco farther south in Brazil, but you get the picture. It was an emotional response.

That 75-gallon tank has been with me ever since, through thick and thin. It is now the centerpiece of its fifth living room, scoured by its third Eheim, and has been the home to thousands of different fish

over the course of these many years. It has housed home-grown families of kribbs and rams and angels, spawned colonies of corys and killies, and even a baby rummynose tetra would turn up every now and then. If I had the space, I'd have five or six tanks that size, one for each major biotope—Amazon, Congo, Rift Lakes, Sunda, and Sahal. Add a saltwater reef tank to that too. But instead, this one tank has been all of those to me.

Its arrival was like giving birth. Well, at least at the time it felt that way. In the life-altering miracle department, nothing, of course, compares to the actual births of our daughter and son. And they grew up with that aquarium too, gazing into its parallel world, asking a thousand questions, offering flakes from their tiny hands. "This is way better than TV," I'd tell them, and for a few years they actually believed me. Their friends—and ours—were always impressed with the set-up. The kids would stare at it, the adults would discuss it or try unsuccessfully to impress me with their aquarium knowledge. "Great neon tetras," they might say. "Um, those are actually cardinal tetras..." I tried not to sound condescending but probably failed. It was definitely a curiosity, a focal point, and a conversation piece, and it still is. To me, it makes my house a home.

I'd take the kids with me on my forays to Crystal Aquarium, and later to aquarium stores farther afield, Pacific and Aqua Star and Win Tropical and New Age, so many of them now gone. And places whose names I can't even remember. Was that Fishtown USA that used to be on Third Avenue in the 30's? And what was the name of that place at Broome and Mott, the one with all the flowerhorns? Or the great little store on Amsterdam near 72nd? There are only a few of those

places left, soldiering on in the face of the Petcos and PetSmarts of this world.

A typical Saturday with the kids might include, say, a trip to the Union Square Greenmarket, a game of monkey-in-the-middle in the park followed by a picnic of Greenmarket bread and peaches and cucumbers and cheese, then a hike down to Delancey Street for my Pacific Aquarium fix. Those hikes to Delancey, which were exciting for them at first, started to draw a chorus of “not again!” Too much of a good thing is still too much. Apparently. For some. Plus, of course, as they got older they had plans of their own, playdates and birthday parties and lessons and activities, and I, by then a single dad, was their squire. You know—parenthood.

In fairness, that was not all we did. I took them to all sorts of things and all sorts of places all over the city. As I tell my Manhattan friends who just never leave “the City”: I have a MetroCard, and I’m not afraid to use it. We’d stand in the TKTs line to see a show or take the subway out to Woodside or Flushing or Bed-Stuy to try some great new restaurant I’d heard about or get nose-bleed tickets to a Rangers game or head to Coney Island for hot dogs and roller coasters and the sand between our toes or to Riverside Park to make believe the rocky outcroppings were the prow of the Titanic. They got to take turns exclaiming: “I’m the king of the world!!!” And we’d spend hours and hours and hours in the American Museum of Natural History—basically their winter playground—where they’d run amok in the old, carpet-covered Gems and Minerals exhibit and touch the fossilized stegosaurus plate, and each had their own favorite exhibits we’d have to visit each and every time we were there. Um, just like me and the fish stores. I happily took them on their hundredth pass at the diorama of the medieval Chinese wedding (my daughter’s favorite) or the search for hidden creatures at the then-new biodiversity exhibit (my son’s fave). And we had to have dinosaur-shaped chicken nuggets too. Had to. Every time. At the cafe under the famous blue whale in the Hall of Ocean Life. They called those jaunts about town “Dadventures,” and still do. Cute, right? Besides, one of the great things about raising kids in NYC is the joy of exposing them to all the wonders the city has to offer.

But the trips to aquarium stores continued. In fact I, like many hobbyists, absolutely cannot be within striking distance of an aquarium store without carving a detour to stop in, have a look, see if anything special has turned up, and ask what might be arriving soon. It’s a compulsion, really. The same with my other big hobby, plants. If there’s a nursery or plant store nearby, I must go. Must. And if the kids were with me, they had to go too.

One day, heading east on Delancey after a trip to Economy Candy (the kids and I call it “The Happiest Place in the World”) and on our way to the old Essex

Street Market, I said because I couldn’t not: “Hey, let’s stop into Pacific Aquarium for a look.” I could practically hear their eyes roll. My son, who was maybe 10 at the time (my daughter is three years older) turned and said: “You know, Dad, it doesn’t matter how many times you take us to fish stores, we’re never going to be into fish.” And I said: “Eli, I don’t take you to fish stores so you’ll be interested in fish, I take you to fish stores so you’ll see what it looks like to be interested in ANYTHING.” And in we went.

People say that New York City kids grow up too fast. But I think that kids everywhere else grow up, well, too slow. Although it seemed weird to me when I was an eight-year-old in Atlanta, in retrospect I really appreciate that my parents let me attend fish meetings and shop at pet stores and nurseries solo from such a young age. Either they knew I was responsible and ready or they just didn’t know what else to do. The latter, I think. Whatever the case, through my hobbies I learned how to be on my own in the world. But by the time I was twelve or thirteen and ready for a greater degree of independence, I was stranded on our suburban cul-de-sac. Every day was a negotiation over transportation. Lots of carpools, lots of dimes in payphones, and lots of waiting and waiting and waiting to get driven somewhere. And although getting my driver’s license on my sixteenth birthday was a giant leap toward the greater autonomy I’d already been ready for for years, my friends and I still had to whine and wheedle our way into the possession of a family car to be able to get anywhere. When my NYC kids were ready to go, they put on their shoes and they went.

They’re now 28 and 31, and although they are indeed not into fish, they do have driving interests of their own, as intense as my own. My daughter in journalism and books, my son in the food world and as a more-than-just-avid Jets fan. They talk about their interests to me the same way I talk about my fish—in breathless detail—and I am thrilled to listen. They’re spectacular people, gotta say, passionate and principled and New Yorkers to the core. So to all those kribensis families, thank you. To all those markets, all those museums, all those restaurants, all those nurseries and aquariums and book stores, thank you. And to the people at all those places who patiently explained and described and let their own passion and humanity come through, thank you. Mission accomplished.

My kids both moved into new apartments a couple of years ago (yes, mid-pandemic). When I asked them if there were anything they needed for their new places, they both, entirely independently, said, “Hey, maybe you could get me a plant.” I’m telling you, my heart skipped a beat. Both times. Whether or not the next request is for an aquarium, just, you know, to make a house a bit more of a home, once again: mission accomplished!



Scientists Single Out a Suspect in Starfish Carnage:



A sunflower star off Alaska. Their limbs can number between 16 and 24 and can span four feet across.

Credit: Jennifer Idol/Stocktrek Images, via Science Source

by Kendra Pierre-Louis - New York Times

In 2013, starfish — including the morning sun star, the richly hued ochre star and the sunflower star, whose limbs can span four feet across — started dying by the millions along the Pacific Coast from Mexico to Alaska.

They were succumbing to a wasting disease. It began with white lesions on their limbs, the dissolution of the surrounding flesh, a loss of limbs and finally death. Understanding, let alone solving, the problem would take research.

One day, shortly after the epidemic began, Drew Harvell, a professor of ecology and evolutionary biology at Cornell University who had been sounding the alarm about the disease, received a curious letter.

"I received a \$400 check in the mail from a group of schoolchildren from Arkansas," Dr. Harvell said. "These kids were so upset about the idea of starfish disappearing from the oceans that they went out and they did this fund-raiser and raised 400 bucks for us to help in our research. I never asked them to do this. They just did."

Dr. Harvell matched it with her own money, and a donor kicked in quite a bit

more. "That was what funded some of our early surveys," she said. "These kids, who none of them had been to the Pacific Ocean, but they just needed to know those stars were there."

One of the ultimate results of the children's donation, a paper that sheds some light on the decline of the starfish, also known as sea stars, was published Wednesday in the journal **Science Advances**. The main suspect: our warming oceans.

In 2013, parts of the Pacific Ocean became unusually warm as part of a broader marine heat wave, nicknamed the Blob, that would last through 2015 and that was very likely exacerbated by human-caused global warming. But while the ocean warmed, it didn't warm evenly, making it hard to tell if the heat wave was contributing to the starfish deaths.

This article, originally from the New York Times, appeared in the November-December, 2019 issue of the Brooklyn Aquarium Society's *Aquatica*.



In the study, which was led jointly by Cornell and the University of California, Davis, Dr. Harvell and her colleagues compiled data from citizen-scientists and the National Oceanic and Atmospheric Administration. Then they compared changes in the sunflower star population with changes in ocean temperature during the outbreak.

While the disease affected 20 species of starfish, the researchers focused on the sunflower star because it was especially hard hit and because there was good historical data on its population before the epidemic.

The researchers found that the die-off of the sunflower star matched the pattern of heat spreading through the ocean.

According to Rebecca Vega Thurber, an associate professor of environmental microbiology at Oregon State University, who was not involved in the study, “What’s really

For example, if you’ve had chickenpox you are carrying the virus that causes shingles.

Roughly a third of carriers will develop the disease, but two-thirds won’t. It takes something to prompt its emergence.

Heat has also been implicated as a trigger in the spread of a fungus that is wiping out frog and toad populations around the globe, as well as in coral diseases. In fact, when corals bleach or lose their symbiotic algae because of warming oceans, it’s typically disease that ultimately kills them.

“There are things we can do to help marine life,” Dr. Harvell said. “We can replant seagrass beds and protect mangroves, for instance. But ultimately, we need to stop climate change. The world’s oceans have absorbed more than 90 percent of the atmospheric heat humans have caused by releasing greenhouse gases.”



Images taken 20 days apart off British Columbia in October 2012, the outset of a starfish wasting disease. Credit: Neil McDaniel

exciting about this paper is the really strong correspondence between this temperature anomaly that occurred during that year when the sea stars started dying.” Everywhere the warming went, the sunflower stars sickened and died.

The study showed a correlation between warming temperatures and the spread of the disease, not a direct cause. But it corroborates a hypothesis that was initially questioned because the virus that researchers think is responsible also shows up in healthy sea stars. “That trigger, in the case of this paper, seems to be temperature,” Dr. Vega Thurber said. Dr. Thurber pointed out that the presence of a particular pathogen does not necessarily mean a disease will develop.

While some affected sea stars have begun to return to American waters on the West Coast, the sunflower star has not returned off the lower 48 states.

But last summer, on the south coast of Alaska, researchers saw a glimmer of hope: the reappearance of sunflower stars, which had disappeared from Prince William Sound during the outbreak.

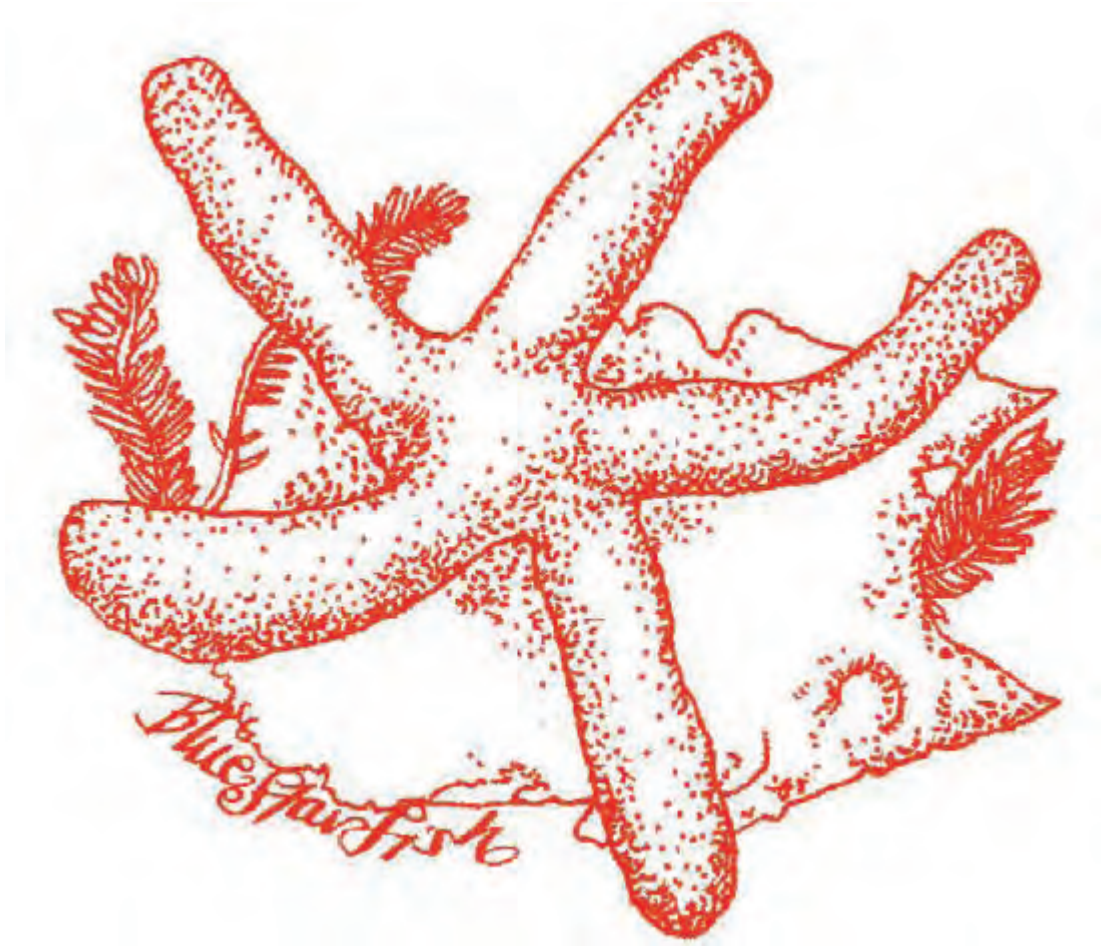
“We don’t know where exactly they came from,” said Brenda Konar, a professor of maine biology at the University of Alaska, Fairbanks, who was not involved in the Science Advances study. “They were pretty small and we don’t know if they’re going to survive. So we’re really curious about what we’ll see next summer.” If they make

a comeback, the Arkansas students, who are now teenagers, will likely be delighted.



Kendra Pierre-Louis is a reporter on the climate team. Before joining The Times in 2017, she covered science and the environment for Popular Science.

@kendrawrites



To Dump, Or Not To Dump?

Story and Photos by Dan McKercher

Like many of you, I raise BBS (baby brine shrimp) to feed my little wet pets and their fry. I keep two cultures going all the time so that I get a fresh one every day. I've never met a fish that didn't like brine shrimp. There are many ways and ideas on how to hatch out brine shrimp. I've seen it done with as little as a pint of salt water up to a 5 gallon water bottle like the one that you get for use with water coolers. I use two liter soda bottles. There are also lots of ways to culture them. I've met folks who get their saltwater from the ocean, who use kosher salt, table salt, and even used aquarium salt mix for salt water aquariums.



With my Scottish blood, I use water softener salt. \$7.50 for 40 pounds is something I can live with. Sometimes I need to add some baking soda to get a better hatch because of the chemistry of the water that is coming out of the tap.



So what do you do with the spent brine? Dump it? One fella kept reusing it by straining out the egg shells and putting a drop or two of bleach in it before adding another dose of fresh eggs. I, like many, would simply dump it down the drain and start again fresh. BUT, with these past months being what they have, I took a 10 gallon tank and dumped the spent brine in it, added an airstone and light for good measure, and guess what I got?

Yep, a tank full of brine shrimp! I've thought of feeding them to my fish, but I remember being at a friend's house and saw a bottle of daphnia on her kitchen window sill. I said, "Oh! Live fish food!" She looked at me and said "no, pets." So for now anyway they are pets. It will be interesting to see if they reproduce.

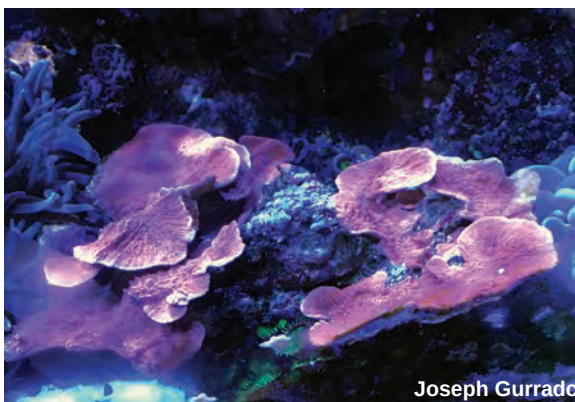
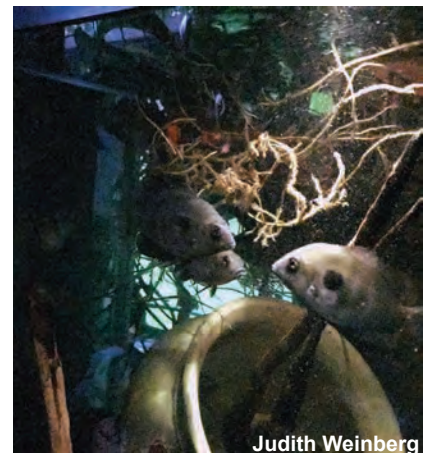
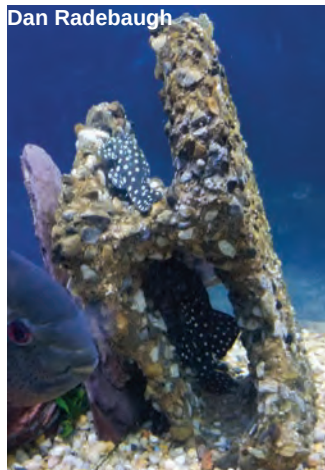


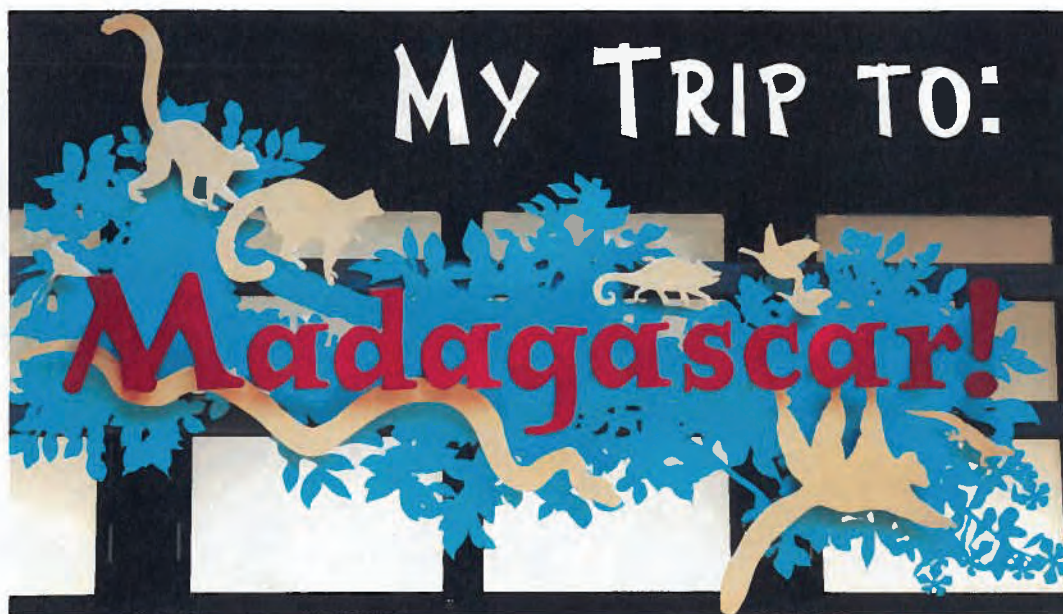
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Fishy Friends' Photos

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!





by SUSAN PRIEST
photographs by Al Priest

The big day is finally here! I have been looking forward to this trip for four years. Let me go over my list one more time. Map? Check. Safari hat? Check. Notebook? Check. Membership card? Check. It looks like I'm ready to go.

Turn right at the corner, left at the second light, and watch out for potholes! I might make better time if I tag along with one of those new buses that can hold the green light long enough for them to go through. Oops, pay attention; the NYBG (New York Botanical Garden) is not today's destination. Here we are. Oh my, what a long line of traffic. The parking lot will be filling up fast!

June 20, 2008 was opening day for the new Madagascar exhibit at the home of the Wildlife Conservation Society (WCS), more commonly known as the Bronx Zoo, and I was among the first of the day's visitors. Over the last four years, the lion house, a landmark building which opened in 1903 (just four years after the 1899 opening of the zoo itself), was being redesigned to offer a representation of the environment and wildlife of Madagascar. It did not disappoint!

Preconceived Notions

I must admit to having had my own ideas as to what Madagascar is like. Some of them were proven true, but there were a few surprises in store for me, as well. In my mind I pictured Madagascar as being one large rainforest, with a few variations on the theme that might include beaches around the coastline. In actuality, it has a wide array of

habitats. It has mountains in the east, plains in the west, savanna grasslands, and yes, areas of rainforest in between. There are also a couple of specialty environments which I'll save for later.

Freshwater Fish

Among the things which the Bronx Zoo does particularly well are their aquarium displays.* One of the most striking exhibits in Madagascar is the underground river (this is one of those specialty environments I mentioned). To describe it with words leaves the author as well as (hopefully) the reader longing to be standing in front of it. It is a wall of glass that puts you literally beneath the surface of the river. You feel as if you are swimming among a very large school of pinstripe dambas (*Paretroplus menarambo*). Ripples of light penetrate the water and show off these beautiful fish to their best advantage. They are eye-catching blue cichlids with red-tipped fins, and are endemic to Madagascar. They have been saved from the brink of extinction by the many efforts of the WCS.

Lounging nearby are a pair of Nile crocodiles. Even though I didn't see them move so much as an eyelid, they left no doubt in my mind that they are the real deal. (There is no sign announcing the feeding time for the crocodiles.)

Throughout the lakes, marshes, estuaries, rivers, and brooks of Madagascar there are a wide variety of killifish, catfish (some of which are mouthbrooders), mudskippers, blind cave fish, and of course, rainbowfish, including the Madagascar rainbowfish (*Bedotia madascariensis*).

Certain introduced species have all but extinguished many native species of freshwater fish. The most notorious of these is the Asian snakehead: *Channa* spp. A close second is the largemouth bass.

Mammals

Of the many mammals endemic to Madagascar, there are two in particular which are ambassadors of their fragile island home. The first is familiar to all of us, that being the lemur. There are four different species of lemur in the Bronx Zoo exhibit. Lemurs eat fruit, pollen, nectar, and seeds. One of the informational kiosks tells visitors that there are 39 species of lemur, and approximately one third of them are endangered.

Secondly is the fossa (*Cryptoprocta ferox*). Not quite as familiar as the lemurs, but no less interesting, this predatory animal resembles a large cat, but is closely related to the mongoose. They are solitary creatures which live and hunt alone. What do they eat? Among other things, lemurs! Yikes!!

Frogs

Frogs are the only amphibians in Madagascar. At the time my guide book was written (*Madagascar*, by Hilary Bradt) in 2007, there were 230 described species, with many more continuously being added to the list.

The frogs of Madagascar come in every size and color imaginable. Sizes range from the tiny *Stumpffia pygmaea* at 1cm, to the giant

Hoplobatrachus tigerinus, measuring in at 17cm. The more brightly colored they are, the more poisonous. Adventurers beware!
(FYI: a group of frogs is called an "army.")

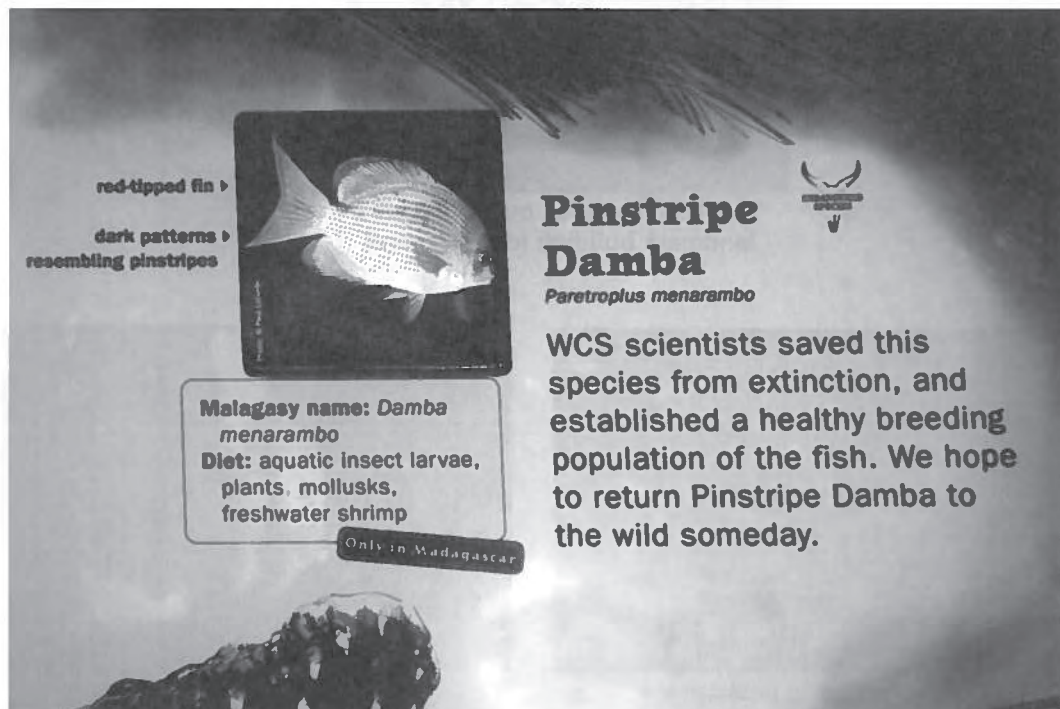
Flora

Madagascar is home to over 13,000 flowering plants, and an astonishing 89% of these are endemic. Among the most recognizable to the rest of the world are the orchids, succulents, ferns, aloe, and palms, to name but a very very few.

Most distinctive of all, and almost serving as a signature of Madagascar, are the Baobab trees. Their trunks are "swollen," enabling them to store enough water to meet their needs for a year or more. Small branches grow off of the top. To me these look like upwardly-mobile tendrils of seaweed with small leaves growing off of the tips.

One Last Surprise

I'm sure my mouth must have been hanging open with amazement as I got my first view of the "Spiny Forest!" (Yes, this is the other specialty environment I promised you.) Who could ever have guessed that this tropical island might be home to such a desert-like habitat, and have such a wide variety of tangled and thorny plants? It is located at the southwest tip of the island.



red-tipped fin ▶

dark patterns ▶
resembling pinstripes

Pinstripe Damba
Paretroplus menarambo

WCS scientists saved this species from extinction, and established a healthy breeding population of the fish. We hope to return Pinstripe Damba to the wild someday.

Malagasy name: Damba menarambo
Diet: aquatic insect larvae, plants, mollusks, freshwater shrimp

Only in Madagascar



**A rainbowfish endemic to Madagascar.
This fish is about one and one half
inches long**



**A red-ruffed lemur,
*Varecia variegata rubra***



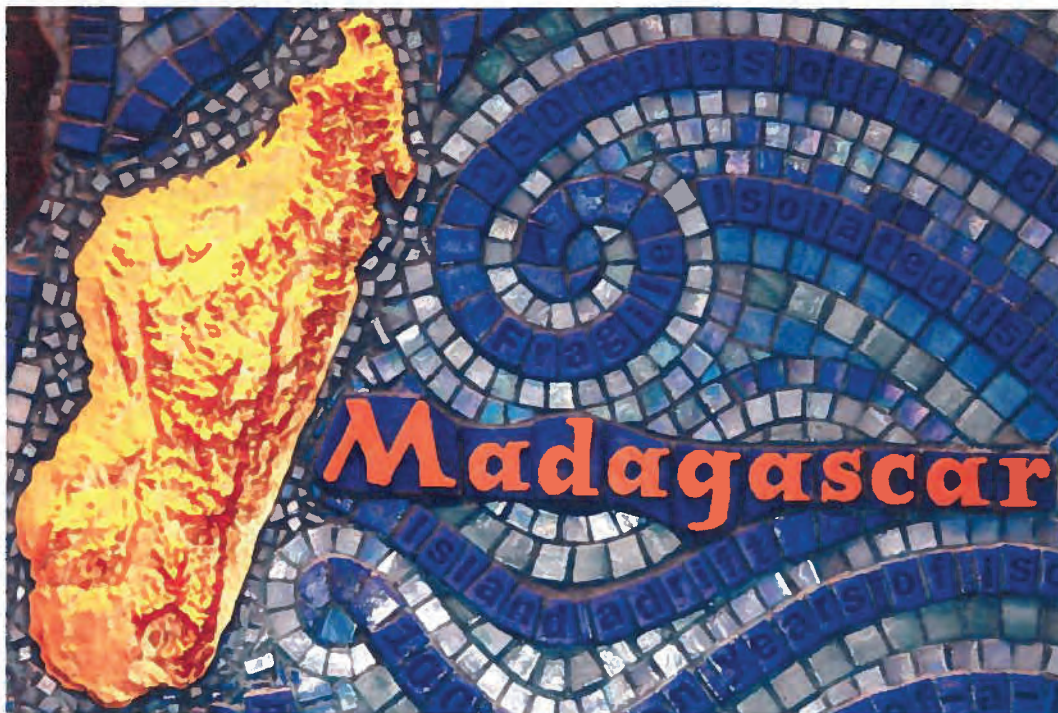
**This lion has been overseeing his
landmark building for 105 years!**



**This tomato frog is about the
size of an extra large chicken egg**



***Cryptoprocta ferox*. Fossa are
related to the mongoose**



At first I thought that most of the plants were varieties of cacti. I later learned that predominant among them is a very prickly plant called *Didereaceae*. It has deciduous leaves, and thorns (not to be confused with the spines of a cactus, that are actually a type of leaf).

Making their homes in this very hostile environment are the sifakas (pronounced sheefaak), also known as the famous “dancing lemurs.” They have earned this name by their ability to leap from one thorn-laden plant to another without pricking themselves.

So Much More

Birds, reptiles, insects, rodents, marine fish; the list is endless of the wildlife topics that I haven't mentioned here. Even the ones I have included have received only the most superficial attention. There is so much more to learn. I hope I have captivated your curiosity.

Homeward Bound

There are always adventures to be had at the zoo, and it is only two miles from my home. As I cross Boston Post Road while heading east on Pelham Parkway, I am already looking forward to my next visit. I'll be keeping a corner of an eye open for GCAS tee shirts. Maybe I'll see you there!

References:

New York City Zoos and Aquarium, Scheier, Joan. Arcadia Publishing, 2005.

Madagascar, Ninth Edition, Bradt, Hilary. Globe Pequot Press, Inc., 2007.

**There is a very delightful display of Congo tetras in the Congo Gorilla Forest. It is in the center of the room, so that you can walk all the way around it, and it has mangrove trees growing up and out of the center. Not to be outdone is Wild Asia. There is a glass wall behind which there are giant gouramies, huge turtles, and tinfoil bars the size of hubcaps! Trust me when I tell you that this sight alone is worth the trip.*

A note from the photographer:

The graphic in the headline is actually a photograph of the sign above the door of the building.

Also, the mosaic at the top of this page is a small section of a much larger piece which depicts the entire globe, and is on display as you first enter.



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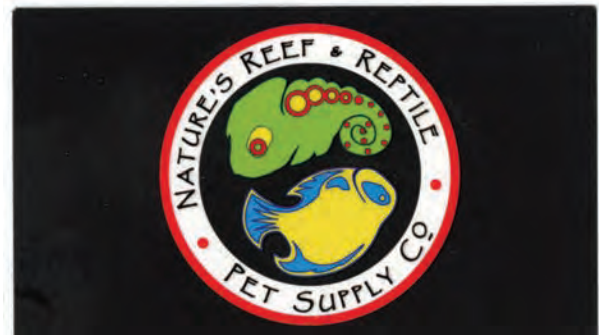
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Researchers Spot A Rare Dragonfish

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.

Researchers in California recently came across an incredibly elusive type of deep-sea dragonfish nearly 1,000 feet below the ocean surface.

“In more than three decades of deep-sea research and more than 27,600 hours of video, we've only seen this particular species four times!” the post reads.

This creature maxes out at just under 7 inches long, though some of its cousins can grow to be as big as 20 inches long. According to Fishbase, the highfin dragonfish is found in the eastern Pacific ocean off the west coast of North America and at depths ranging between about 740 feet to 4,500 feet below the ocean's surface.

With an appearance akin to something out of a science-fiction flick, these fish have long narrow bodies and little fins. And though the specimen the



The highfin dragonfish, *Bathophilus flemingi*, was recently spotted by a team of Monterey Bay Aquarium Research Institute researchers aboard the *Western Flyer* research vessel, the institute announced on Twitter. And though they have come across dragonfish before, this particular find was incredibly special.

researchers encountered was a beautiful shade of orange, most types of dragonfish are black. In fact, the pigment of their skin is some of the blackest blacks found in nature, MBARI said.

Some dragonfish utilize a luminescent lure to catch their prey, dangling it in front of its mouth until an unsuspecting treat comes along.



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<https://www.npr.org/2022/05/07/1097443275/rare-type-of-dragonfish-california>
<https://fishbase.mnhn.fr/summary/11568>

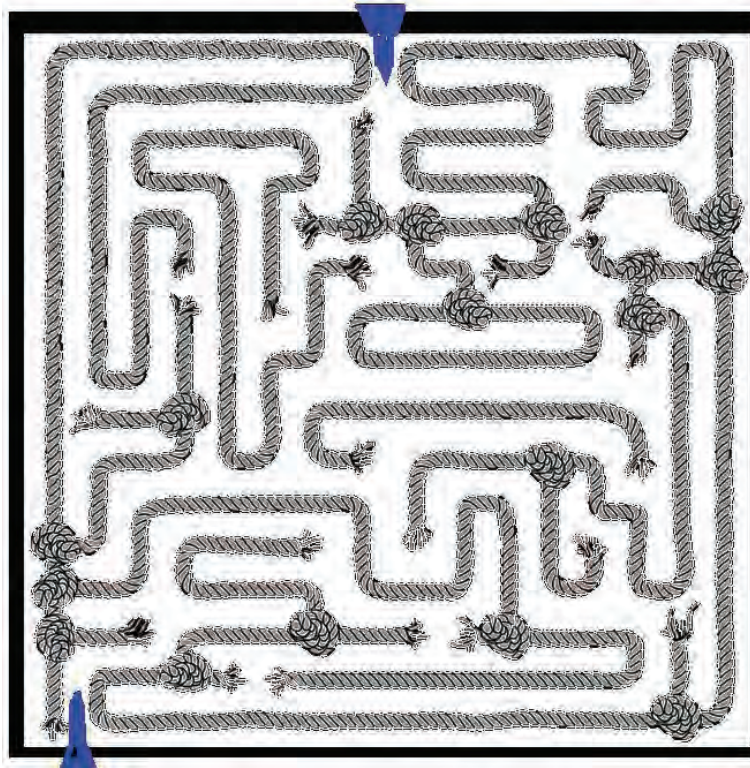


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