

modern AQUARIUM



November 2017
volume XXIV
number 9

Greater City Aquarium Society - New York

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Series III Vol. XXIV, No. 9 November, 2017

ON THE COVER

Our cover photo this month features the gray angelfish (*Pomacanthus arcuatus*) and a mature hawksbill turtle (*Eretmochelys imbricate*) preparing to go their separate ways after sharing a meal of coral. For more on this undersea high tea, see Steve Sica's story, "Angels and Turtles" on page 10.

Photo by Stephen Sica

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From the Editor

by Dan Radebaugh

Here we are approaching the end of another year at Greater City and **Modern Aquarium**. We're still trying out new things. Our speaker this evening, Karen Pattist, will be joining us via Skype, rather than in person. While we're curious to see how this works out, my main worry is that there is a host of new things that might go wrong (I've used Skype only once before, to interview a job candidate. Seemed to work out—we hired him). I suppose it's really a case of *different* things that can go wrong, rather than more things. At least we don't have to worry about her getting caught in a traffic jam, or stuck on a delayed flight.

As you might have guessed from our cover photo, this month Steve Sica is treating us to another in his terrific series of photo essays from the Caribbean, this one entitled "Angels and Turtles." The photography is predictably excellent, and Steve seems gently bemused by inter-species behavior and what we don't know about it.

On page 14 You'll find Pictures From Our Last Meeting, followed page 15 by this month's exchange article, which provides us with an introduction to some community catfish from Asia, and includes some very nice photos.

On page 18 you'll find a listing of some species which are currently prohibited from being sold, traded, or given away in the state of New York in general, and at Greater City auctions in particular. I must say there were some surprises for me on this list, particularly some of the plants. I anticipate that over time this list will grow rather than shrink, and we should all be watchful.



I follow on page 20 with a short article on some goldfish I've been keeping, and Elliot Oshins chips in on page 23 with a story about his adventures on a recent expedition to a fish auction. The Undergravel Reporter gives us some surprising (to me, anyway) information on an experimental use of THC with farmed tilapia. See "Stoned Fish" on page 29. As usual, the issue closes with our Fin Fun puzzle, this time, in honor of our speaker's topic, entitled "Coy Koi."

Be sure to see page 22 for the details of our Annual Holiday & Awards Banquet. Please try to get signed up this evening, if you haven't already done so.

This has been a good year for **Modern Aquarium**. There have been many wonderful articles from our member-authors, including some new contributors. Keep up the great work! It certainly isn't too early to start thinking about new articles for next year!





GCAS Programs

2017

It is our great fortune to have another admirable cast of speakers who have so graciously accepted our invitation to join us throughout the coming season, bringing us their extensive knowledge and experiences. You certainly won't wish to miss a moment of our prominent guests, not to mention the friends, fish, warmth, and camaraderie that accompany each meeting.

March 1	Joseph Ferdenzi <i>Killifish Demystified</i>
April 5	Michael Marcotrigiano <i>Breeding Show Guppies</i>
May 3	Michael Lucas <i>Butterflies in the Water: Discovering Hydrophlox Shiners</i>
June 7	Joseph Graffagnino <i>My New Fishroom</i>
July 5	Horst Gerber <i>Decorating Your Fish Tank</i>
August 2	A Night at the Auction
September 6	Emily Voigt <i>The Dragon Behind The Glass</i>
October 4	James Perrenod <i>Discus</i>
November 1	Karen Pattist <i>Koi Appreciation – Kohaku</i>
December 6	Holiday Party!

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 (877) 299-0522. Copyright 2017 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 donnste@aol.com. 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. For more information, contact: Dan Radebaugh (718) 458-8437 or email gcas@earthlink.net. Find out more, see previous issues, or leave us a message at our Internet Home Page: <http://www.greatercity.org> or <http://www.greatercity.com>.



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TONIGHT'S SPEAKER:

Karen Pattist, on Koi Appreciation – Kohaku



BOD Member (and Founding Member!) of Koi Organisation International 2009-Present
President, Pioneer Valley Water Garden & Koi Club – Nov 2009 to Nov 2012
Marketing Manager for the MAKC, Virginia based, July, 2003 – January 1, 2005 (volunteer)

Writing Experience

- Books Edited:
- English editor for the book “Kokugyo” by Mr. Kodama, published in 2002
- English editor for Mr. Kodama’s second book, “Kokugyo 2”, published May 2004
- English editor for Mr. Kodama’s third book – COMING 2017!

- Articles Written or Edited:

- Koi USA (starting July-Aug 08 to May/June 09) – Born In The USA Series 2
- Koi USA (starting Nov/Dec 05 to May/June 08) – “American Koi Breeder Profiles”
- Monthly in MAKC Magazine (March 07 to Apr 08) – “Artists Corner”
- Monthly in MAKC Magazine (04-06) – “Meet Your Sponsors”
- Nov/Dec 2004 MAKC Magazine – “Recap of the MAKC 14th Annual Show”
- August 2002 MAKC Magazine – “Father’s Day Young Koi Show”
- March 2003 MAKC Magazine – ‘Koi Herpes Virus Outbreaks’
- March 2003 MAKC Magazine – ‘A Good Quarantine System, Part 1’
- April 2003 MAKC Magazine – ‘A Good Quarantine System, Part 2’
- August 2003 MAKC Magazine – “Koi Health Clinic”

Koi Shows and Labs

- Lab for K.O.I., and Speaker at PNKCA Convention (June 19-21, 2015)
- Koi Show Chair of Pioneer Valley Koi Club Show (June 26 & 27, 2010)
- Koi Show Chair of Pioneer Valley Koi Club Show (June 14 & 15, 2008)
- Organized and Taught 2 hour Koi Health Lab at 2008 MA Koi Show, June 14&15
- Koi Show Chair of Pioneer Valley Koi Club Show (June 20 & 21, 2006)
- Organized 8-hour Koi Health Lab for Koi Professionals, Springfield, MA, February, 2006
- Co-Chairperson of Pioneer Valley Koi Club Show, Koi Show Chair (August 6 & 7, 2005)
- Show Chairperson of MAKC 16th Annual Koi Show (October 9 & 10, 2004)
- Show Chairperson of MAKC North and Central Chapters Young Koi Show (June 16, 2002)
- Won Grand Champion and Baby Grand Champion – MAKC 14th Annual Koi Show 2002
- Benched over a dozen Koi shows
- Judges Recorder for total of 15 shows
- Organized more than a dozen major wet labs/seminars
- Worked at over 30 Koi Shows
- Taught and ran Water Quality at over a dozen Koi shows, currently Instructor for Koi Show Water Quality Specialist Certification

Ponds:

- Built first goldfish pond 30 years ago
- Built my first Koi pond 25 years ago
- Finished the ‘Ultimate’ Koi pond – 55,000 gallons, 2003

Graduate of First Koi Health Advisor Class 2002, Responsible for KHA Continuing Education 2005-2009
First Certified Master Koi Health Advisor June 2006, First Certified Phish Geek Koi Health Advisor October 2008

Visited Niigata, Japan

- March 3-14, 2005, Host was Mr. Kodama
- February 11-19, 2003. Host was Masahara Hoshino of Koda Koi Farm.

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!



Ruben Lugo



Joe Gurrado



Joe Gurrado



Joe Gurrado



Ruben Lugo



Ruben Lugo

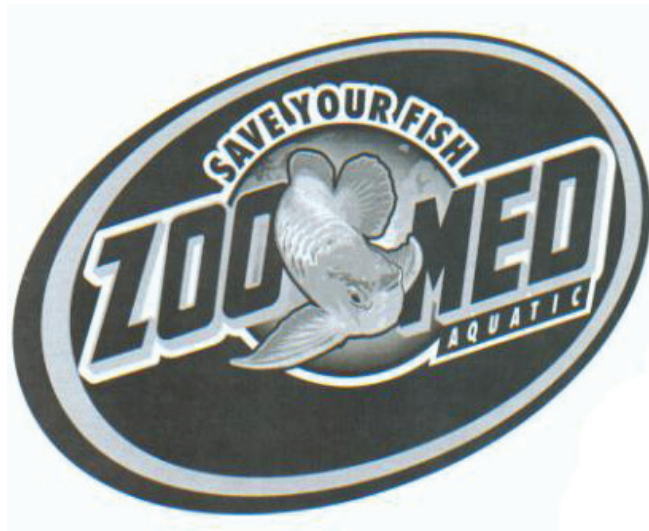


October's Caption Winner: Rita Dunne



EHO

Catfish Shrugged





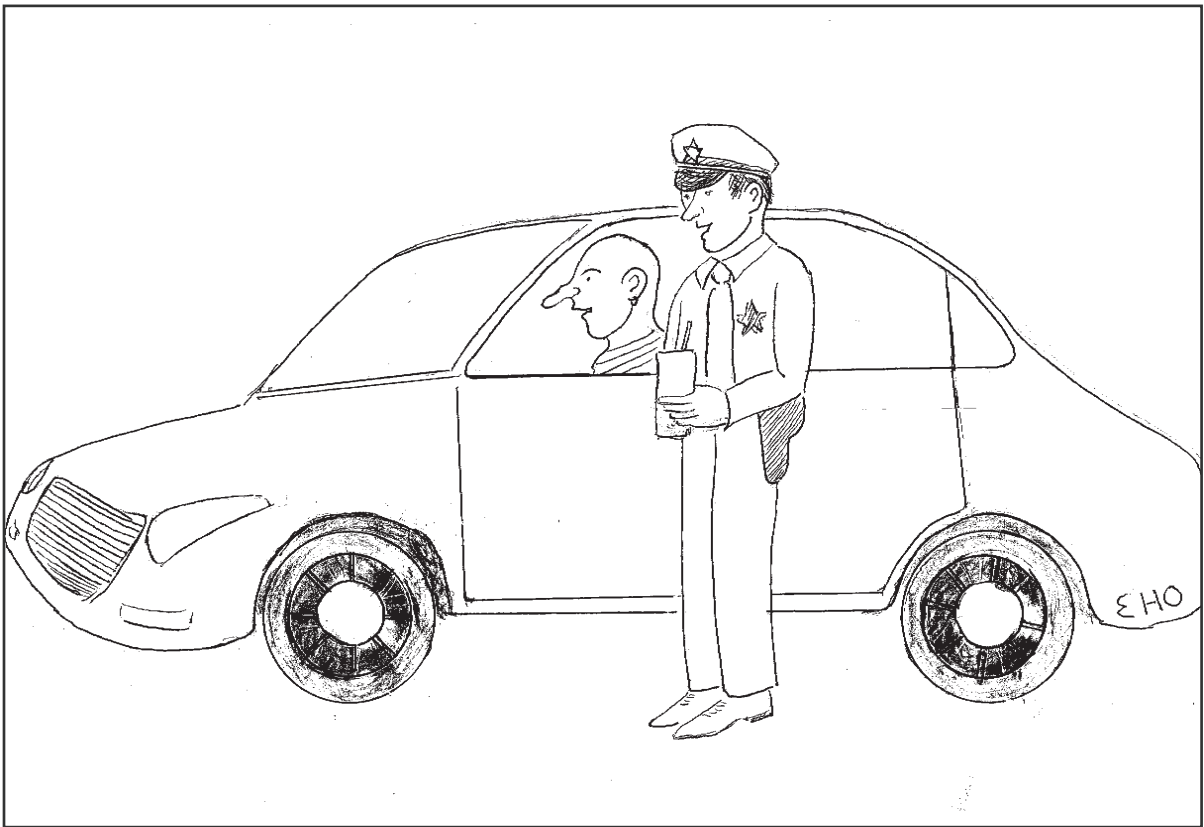
BOWL SHOW RULES

There is a Bowl Show at every GCAS meeting, except our Night at the Auction meeting (August) and our Holiday Party and Awards Banquet meeting (December). These shows are open to all members of GCAS. Rules are as follows:

- Only current GCAS members may enter fish in the Bowl Show.
- There is a limit of 2 entries per member per meeting.
- Unlike some other clubs, every month is an “open” Bowl Show at the GCAS (i.e., there is no “theme,” such that one month cichlids are judged, the next livebearers, the next anabantoids, etc.).
- Any fish that wins any prize (1st, 2nd, or 3rd) may not be entered again in the same meeting year.
- The current Bowl Show Coordinator is Leonard Ramroop, who usually also serves as judge (although guest speakers are often asked to do the judging honors).
- 2.5 gallon containers are available for use (brought to the meetings by the Bowl Show Coordinator), but entrants are responsible for providing enough (and suitable) water for their fish.
- For a fish too large (or too small) for those containers, entrants must supply a suitable container, which must be clear on at least three sides.
- Only one fish per container (i.e., no “pairs”).
- No plants, ornaments, or equipment (filters, airstone, etc.) are allowed in the judging tank (an external mirror, or opaque cards between containers is acceptable, as is a cover that does not obstruct side viewing).
- Points are awarded: 5 points for 1st Place, 3 for 2nd Place, and 1 for 3rd Place.
- Ribbons are awarded: blue for 1st Place, red for 2nd Place, and green for 3rd Place.
- The person with the most points at the end of the meeting season receives the Walter Hubel “Bowl Show Champion” trophy at the Awards Banquet.
- The decision of the judge(s) is final.
- A running UNOFFICIAL total of the points awarded is printed in **Modern Aquarium**. Only the tally of points maintained by the Bowl Show Coordinator is official.
- **In case of ties:**
 - 1st Tiebreaker – most 1st Places
 - 2nd Tiebreaker – most 2nd Places
 - 3rd Tiebreaker – most entries

The Modern Aquarium Cartoon Caption Contest

Modern Aquarium has featured cartoons before. This time though, 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 can turn in to Marsha 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:

Your Name:

Angels and Turtles

Story and Photos by Stephen Sica

Last month I wrote about my encounters with the largest hogfish, *Lachnolaimus maximus*, that I have ever observed anywhere. If you recall, we were swimming along a reef in thirty feet of water

heading back toward our boat. A minute or two after the hogfish encounter, I saw what appeared to be several fish nibbling on a small coral pinnacle rising into the water column a few feet above the main reef. This pinnacle, or cone, was small, but it was large enough to attract the fish. As we approached, I saw that the nibbling fish were angelfish. Thinking these fish would be a

good photo subject, I swam forward and discovered that two angelfish were sharing their tasty morsel with a small hawksbill turtle, *Eretmochelys imbricata*. Before our dive, Donna had told the divemaster that she wanted to see a turtle. So she saw two.

When we first spotted this fish and turtle trio, all were picking at the coral in close proximity to one another. It appeared to me that they were either ignoring one another, or enjoying a friendly relationship. Perhaps their instincts were telling them that there was no need to fight over food. The ocean is vast, with an unlimited food supply of coral, algae, fish, and other morsels. Well, I surely hope that they really don't take all this food for granted, assuming that they are capable of processing thought. I assume that fish thinking is an inborn pattern of behavior characteristic of a species and shaped by its biological necessities, such as survival and reproduction.

After studying the fish and turtle trio for a few seconds, I did what any diver

with a nice shiny camera would do. I began taking photographs while continuing to swim closer. The small hawksbill was in the thirty pound range, which is at the small end of their average size. Most weigh

in the thirty to one hundred pound range. The record size is two hundred and eighty pounds.

The angelfish appeared at first to be French angels, but when I got close enough to accurately identify them they were plainly gray angelfish, *Pomacanthus arcuatus*. For many years angelfish were included in the same family as butterfly fish

because they are similar in habits and general shape. Many juvenile angelfish, especially the French and gray, are similar in markings and color. On the other hand, adults are easily distinguished from one another. The gray angel is uniformly gray, thus the name. Some experts describe the color as velvety shades of gray. Another distinguishing body shape is their flat tail with a transparent to white fringe at the end. French angels have a rounded tail, like a curving out convex lens. Some juvenile gray angels are believed to be parasite cleaners. I have never observed this.

The majority of angelfish that I have observed in the wild have been adults. However, a few years ago on the island of Saint Kitts, we were diving on

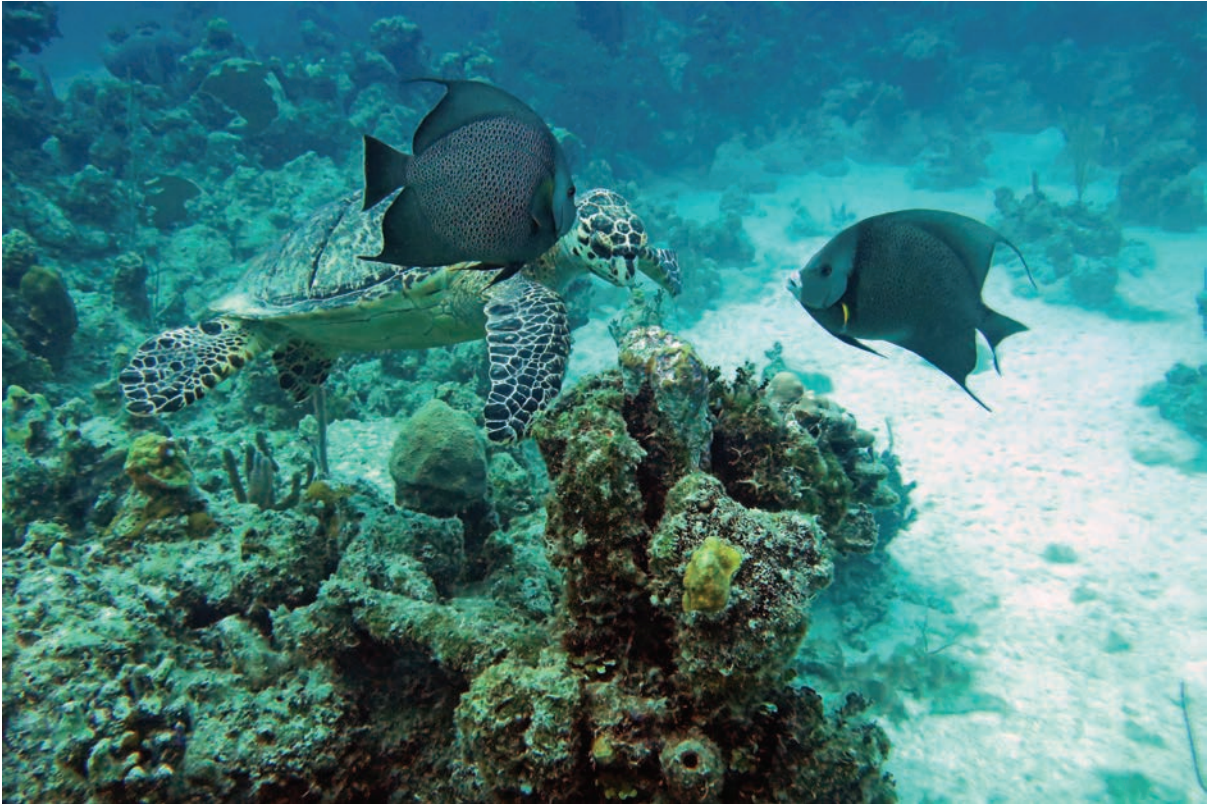
a freighter that had been split in two. Several automobile tires were scattered about the approach to the ship. Each was the habitat for either a French or gray juvenile angelfish. When I see a juvenile, I always think that it's a French angel, because both species are black with vertical



A few minutes into our dive I saw this mature hawksbill turtle, *Eretmochelys imbricata*, swimming along a wall off New Providence Island in the Bahamas. Note distressed appearance of its shell.



After swimming up a sea wall where I had observed a mature adult hawksbill turtle, I saw another smaller hawksbill hovering on the reef. It appeared to be face to face with an adult gray angelfish, *Pomacanthus arcuatus*. The main object of this encounter was a small portion of reef that was protruding slightly above the surrounding area.



It appears that the hawksbill turtle and the gray angelfish on the right are looking at each other in the eye. Is it curiosity or a standoff over food?

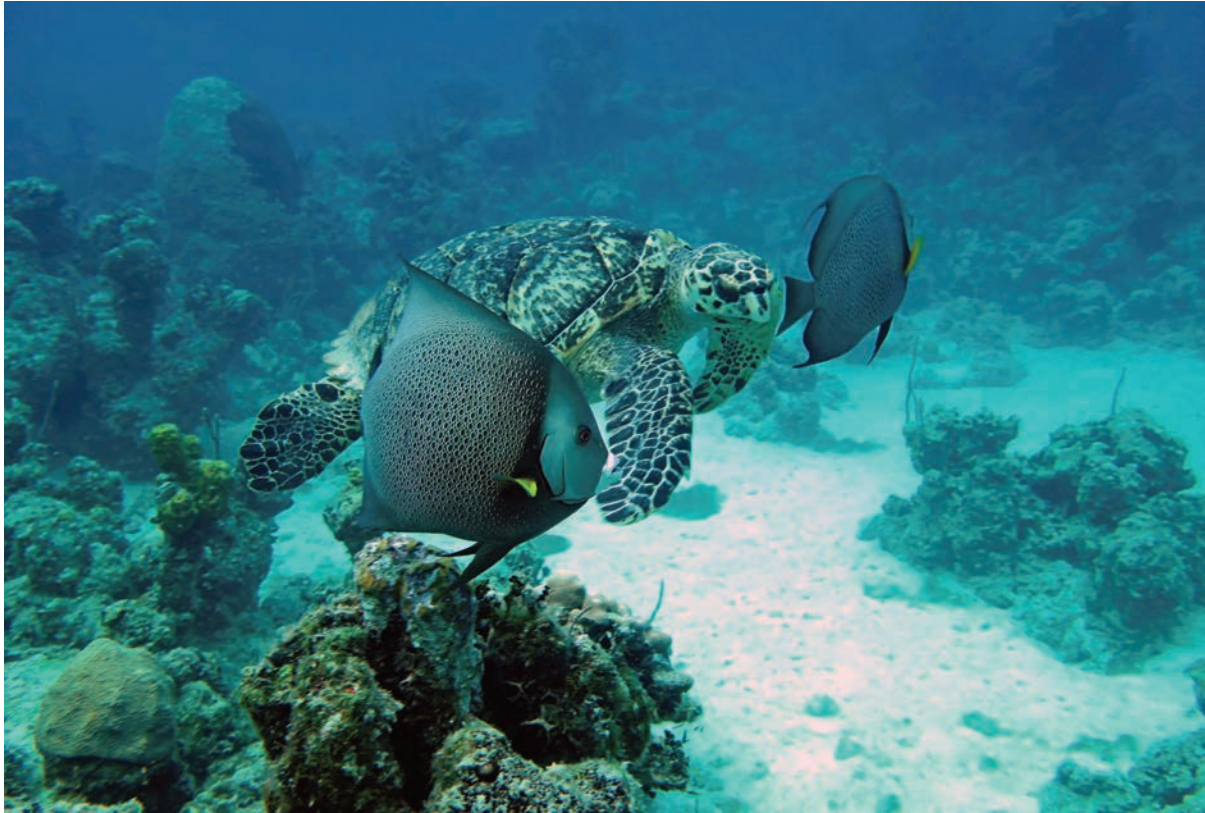


A gray angelfish nibbles at the coral with its companion while a hawksbill turtle waits its turn.

yellow bands running through the head, body and tail. As mentioned previously, the distinguishing feature is the tail. Here's a question for anyone who reads and remembers my stories. What is my favorite angelfish? Why, it's the rock beauty, *Holacanthus tricolor*, closely

Modern Aquarium - Greater City A.S (NY)

followed by the queen angel, *Holacanthus ciliaris*. Do you have a favorite? All are very attractive. Whenever I visit a pet store that sells marine fish, I always check out their angelfish. I used to think that most angelfish were wild-caught, and probably should remain free in



After everyone has completed an enjoyable dining experience, the turtle and angelfish prepare to swim away together.



It appears that every animal is satisfied with its hearty meal. The coral outcropping in the photo does not look very appealing to me; I guess you have to be a fish—or turtle—to appreciate the tasty morsels that it must contain.

the oceans despite their beauty and our attraction to them. But in researching this article, it appears that many species are now farm raised, especially the smaller and lesser known Pacific Ocean species.

While the average size of a French angelfish is about twelve to fourteen inches, I have seen many larger specimens. Gray angelfish can reach two feet, but I have never seen one even near that size. In fact,



Okay, it's really time to go. I wonder if the hawksbill turtle made an appointment with the angelfish to meet before sunset for dinner?

most of the gray angels that I have observed are smaller than or equal to French angels. Some species, such as the cherubfish, *Centropyge argi*, and flameback, *Centropyge aurantonotus*, grow to only three inches. These fish are rare in the eastern Caribbean, Florida and the Bahamas. I have observed neither in the wild.

Many species groupings have similar body shapes. The queen and blue angelfish, and the gray and French angelfish have similar shapes and markings, both as adults and juveniles. I mentioned the French and gray similarities earlier.

You can find angelfish in the wild swimming either alone, in pairs, or even in groups of three or more. Some groups appear to consist of several mated pairs. I believe that angelfish pairs are most common. If you find a solitary fish, another one of the same species is usually in the vicinity. To me, all angelfish are attractive photo subjects. No matter how many times I have photographed angelfish, if I encounter one I'll try to photograph it. With a body profile that fills out a viewfinder, they are natural subjects and simply



One last nibble for the road, or should I say the reef, and then it's time to go before the turtle, or a genuine predator, returns!

eye-catching. Remember, if you see one behind glass in a pet shop, a public aquarium, or better yet, your facemask while swimming along a reef, don't be surprised if it skirts by you with a curious eye. I know you will return the favor.



Most creatures, including humans, decline to pass up a free meal so back to the "table" for these two fish now that the turtle has left.

Pictures From Our Last Meeting

Photos by Al Priest



**James Perrenod brings us
“Discus Q&A”**



**James demos his multi-layer
bagging technique**

Bowl Show Winners:



1st Place: Rich Waizman



2nd Place: Carlotti DeJager



3rd Place: Bill Amely



**Smiles abound at the GCAS as seen on the faces
of Robert and Shane**

Asian Community Catfish: *Mystus* spp.

No copyright information available

Often overlooked in favor of the South American *Corydoras* species, the various *Mystus* species from Southeast Asia have the potential to make charming additions to community tanks. Unlike *Corydoras*, they are active carnivores, but the smaller species hunt for invertebrates rather than fish, and can be kept alongside tetras, barbs and other community fish.



Auchenoglanis occidentalis

Mystus readily consuming all the usual foods such as suitably-sized live and wet/frozen foods, chopped seafood, catfish pellets, and any uneaten flake food they happen to come across. They are nocturnal fish in the wild, but once settled should take food during the day as well, especially in quiet, well-planted tanks with lots of shade.

Taxonomy and distribution

Mystus are members of the family Bagridae and distributed across Africa and Asia. Historically the group has been something of a catch-all taxon that contained species now recognized as belonging to their own distinct families. Several familiar African catfish, including the giraffe catfish (*Auchenoglanis occidentalis*) and the ornate bagrid (*Chrysichthys ornatus*), once belonged to the Bagridae, but are now placed in their own family, the Claroteidae.

Nonetheless, advanced aquarists will have a fair idea of what the average 'bagrid' catfish looks like. Like all catfish they lack scales, but they also lack the armored scutes along the flanks characteristic of many other catfish species. They have long, streamlined bodies equipped with powerful tail fins, and in many cases the adipose fin is quite well developed, often scarcely smaller than the dorsal fin. The whiskers are long and point forwards, and the mouth opens more or less at the front of the head rather than underneath. All this reveals catfish well equipped for life swimming about in streams and rivers hunting for prey.

General care

On the whole these catfish are easy to keep. For a start, they are most adaptable with regard to water chemistry, and will do well across the same sort of conditions as most other aquarium fish. Soft water may be preferred in some cases, but others will thrive in hard water, and at least one of the species mentioned here is a brackish water specialist. Most species will do well across a broad temperature range as well. Feeding doesn't present any real problems, with

Social behavior and compatibility

Many *Mystus* species are gregarious and need to be kept in groups, but this is not always the case. This aspect of their care must be researched carefully before purchase. When social species are kept singly they tend to be nervous and very shy. Conversely, the more territorial species can be surprisingly aggressive and may not even tolerate other catfish, let alone their own kind.

As community fish *Mystus* can work well, but they're all predatory, and tankmates will need to be of appropriate size. Anything small enough to swallow whole will probably be fair game, so ideally tankmates should be of about equal size to the catfish or larger. Small, narrow-bodied fish like neons will be particularly at risk.



Two-Spot Bagrid, *Mystus bimaculatus*

At less than 8 cm in length when fully grown, this is one of the smallest species in the genus and one of the most frequently traded. It is a beautiful fish, pinkish-brown in color with a large black spot behind the shoulder and a black band around the caudal

Reprinted from *Tank Talk* – Dec 2012 / Volume 40, Number 04; Durham Region Aquarium Society.

peduncle. The species is very sociable, and must be kept in a group, preferably consisting of at least five specimens, and the more the better. While this species is quite adaptable and has proven to be fairly tolerant of hard water, it is a blackwater species in the wild, so soft, slightly acidic water is recommended. In community settings, aim for 2-15 degrees dH, pH 6-7.5. Given its small size, this species isn't much of a threat toward its tankmates, but obviously very small fish and shrimps may be at risk if these catfish are hungry. Good tankmates include rasboras, tetras and barbs, as well as fish like gouramis and potentially even dwarf cichlids.



Pearl Mystus, *Mystus castaneus*

This species was long imported as *Mystus armatus*, but that appears to be an Indian species distinguished by a thin band running along the length of its body (photo at right). By contrast, this Southeast Asian catfish is largely unmarked except for a dark blotch on the caudal peduncle. As its name suggests it has a metallic, pinkish-brown coloration that shimmers beautifully in subdued lighting. It is sociable, and best kept in groups of at least three specimens. While predatory, it only gets to 15 cm in length, and can therefore be kept with all sorts of medium-sized community fish including barbs, gouramis, loaches, swordtails, platies, and so on. The species occurs in a variety of stream and riverine habitats in the wild, and does not appear to be fussy about water chemistry. Nonetheless, extremes should be avoided.



Mystus mysticetus

This is another commonly traded species with attractive colors. It is pinkish-brown, with three off-white stripes running along its flanks and a small black patch just behind the gill cover. It has four pairs of particularly long whiskers and strikingly large eyes, and both these features reveal a catfish well-adapted to hunting at night. Although not a large species, only getting to about 12 cm or so when fully grown, it will readily consume bite-sized fish and shrimps, so tankmates need to be of appropriate size. Deep-bodied barbs and tetras will be fine, as will things like gouramis and most dwarf cichlids. It is one of the gregarious species, and needs to be kept in a group of three or more specimens.



Antenna Bagrid, *Mystus armatus*

Despite the widespread use of this fish's scientific name in the hobby literature, this Indian species is only occasionally seen in aquarium shops. In fact most of the so-called '*Mystus armatus*' in the trade are in fact *Mystus castaneus*, as has been mentioned above. The antenna bagrid is a medium-sized species adapted to fast-water habitats where the water is fairly cool and rich with oxygen. So while it appears to be quite hardy and adaptable, optimal conditions would be those of a hillstream-type aquarium maintained at around 22-25 degrees C and provided with a good strong water current. This species does not move about as much as some of the other members of the genus, and likes a cave or shelter somewhere out of the water current where it can rest between excursions. It is not a gregarious species and may be kept singly. Tankmates should be chosen from those adapted to fast-flowing environments, for example *Barilius* spp., giant danios, some of the loaches, and medium-sized loricariid catfish.



Asian Upside-Down Catfish, *Mystus leucophasis*

This is one of the bigger species, getting to around 30 cm when fully grown, but a popular species nonetheless and regularly seen in aquarium shops. As its common name suggests, this species is able to invert itself and will regularly swim about upside-down. Coloration is basically dark grey with a few white speckles. While this species can be kept in mixed-species setups, it is not a community fish as such. It is predatory of course, but is also quite territorial and won't tolerate its own kind or any other catfish that tries to share its chosen cave or shelter. Good tankmates would include big mid-water barbs and characins, as well as suitably robust (rather than aggressive) South American or African cichlids. Water chemistry is not an issue, and this species can do well in both soft and hard water. This is a good species for advanced aquarists with large rough-and-tumble community tanks.



Estuarine Bagrid, *Mystus gulio*

This last species is not commonly traded, but well worth mentioning. It is a true brackish water catfish, and as such could be placed with such fish as monos, scats and archerfish. Wild specimens can reach a maximum length of over 40 cm, but that is exceptional, and most specimens are less than half that size, 15-20 cm being typical. Coloration is basically unmarked silver, darker above and lighter below. This is a schooling species, and should be kept in groups rather than singly, but is otherwise undemanding. Overall an excellent choice for large brackish water communities, though it will of course view very small tankmates as food.



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Greater City Aquarium Society

Prohibited Species List

This is a list of species prohibited from being sold, given, or traded at any Greater City Aquarium Society (GCAS) auction. These species are restricted by NYS or federally, require special permits, and/or have complicated trade requirements. GCAS will remove any of the listed items, and ethically dispose of, or turn over such items to the proper authorities. Common names may differ, so please check the scientific names of any species you sell.

Prohibited Aquatic/Bog/Marsh Plants:

Golden Bamboo (*Phyllostachys aurea*)
Yellow Groove Bamboo (*Phyllostachys aureosulcata*)
Common Reed Grass (*Phragmites australis*)
Marsh Dew flower (*Murdannia keisak*)
Purple Loosetrife (*Lythrum salcra*)
Reed Manna Grass (*Glyceria maxima*)
Smooth Buckthorn (*Frangula alnus*/*Rhamnus frangula*)
Yellow Iris/ Yellow flag iris (*Iris pseudacorus*)
Anacharis/ Elodea/ Brazilian water weed (*Egeria densa*)
Eurasian minfoil (*Myriophyllum spicatum*)
Broadleafwater minfoil (*Myriophyllum heterophyllum* X *M. laxum*)
Cabomba (*Cabomba caroliniana*)—any similar species we cannot identify will be removed from the auction.
Floating Primrose Willow (*Ludwigia peploides*)
Frogbit (*Hydrocharis morsus-ranae*)
Hydrilla/water thyme (*Hydrilla verticillata*)
Parrot Feather (*Myriophyllum aquaticum*)
Uruguayan Primrose Willow (*Ludwigia hexapetala* / *grandiflora*)
Water Chestnut (*Trapa natans*)
Yellow Floating Heart (*Nymphoides peltata*)
Slender false brome (*Brachypodium sylvaticum*)

Prohibited Aquatic Inverts:

Asian Clam (*Corbicula fluminea*)
Zebra Mussel (*Dreissena polymorpha*)
Quagga Mussel (*Dreissena bugensis*)
Asian Sea Squirt (*Styela plicata*)
Asian Shore Crab (*Hemigrapsus sanguineus*)
Bloody Red Mysis Shrimp (*Hemimysis anomala*)
Carpet Tunicate (*Didemnum* spp.)
Chinese Mitten Crab (*Eriocheir sinensis*)
Faucet Snail (*Bithynia tentaculata*)

Chinese Mystery Snail (*Cipangopaludina chinensis malleata*)
Japanese Mystery Snail (*Bellamya japonica*)
New Zealand Mud Snail (*Potamopyrgus antipodarum*)
Rusty Crayfish (*Orconectes rutilus*)
Suminoe Oyster (*Crassostrea ariakensis*)
Veined Rapa Whelk (*Rapana venosa*)
All freshwater mussels or clams native to the USA

Prohibited Fish Species:

Bighead Carp (*Hypophthalmichthys nobilis*)
Black Carp (*Mylopharyngodon piceus*)
Large-scale Silver Carp (*Hypophthalmichthys harmandi*)
Silver Carp (*Hypophthalmichthys molitrix*)
Round Goby (*Neogobius melanostomus*)
Tubenose Goby (*Proterorhinus seilunaris / marmoratus*)
Eastern Mosquitofish (*Gambusia holbrooki*)
Western Mosquitofish (*Gambusia affinis*)
Dojo Loach/Weather Loach/Gold/Marbled Loach (*Misgurnus anguillicaudatus*)
Sea Lamprey (*Petomyzon marinus*)
Tench (*Tinca tinca*)
Walking Catfish (*Clarias batrachus*)
Snakehead (All species described and undescribed in the genus *Channa*)
All species of Piranha
Asian Arowana (*Scleropages formosus/inscriptus*)
Zander (*Sander/Stizostedion lucioperca*)

Prohibited Reptiles/Amphibians:

Alligators/Crocodylians
Monitor lizards
Newts/Salamanders

Other Rules:

Any species native to the State of New York are Prohibited.
Any Game species defined by DEC or NYS are prohibited.
Any species protected by the U.S. Endangered Species Act are prohibited.
Any species not listed that are prohibited federally.
Any species that violate the Lacey Act are prohibited.
Any species imported or transported illegally are prohibited.
Any species GCAS feels may be illegal or a threat not listed may be removed from auction.
Any species listed as “Dangerous” or “Injurious” are prohibited.
Any species that violate CITES laws are prohibited.

For pictures:

www.dec.ny.gov/docs/lands_forests_pdf/isprohibitedanimals.pdf
www.dec.ny.gov/docs/lands_forests_pdf/isprohibitedplants2.pdf



Go for the Gold?

(fish, that is)

by Dan Radebaugh

A year or so ago I started thinking about keeping some goldfish. I've kept them before—in ponds and in aquaria. My first group especially left an impression. Even now, thinking about them makes me wonder when we'll get to the technological point of rendering photo-type images from our memories so that they can be viewable by others. As I write this though, I'm thinking that if we could render an image from memory, we should also be able to render moving images. Wow—a whole new way to learn to lie! But I digress.

I did finally go out to a couple of stores and bought some small feeder goldfish. The price was right, and the folks at the stores let me net the ones I wanted. For nostalgia's sake I also bought a (non-feeder) black Moor. I kept one back in the early 60s, and it was a favorite of my mother. I gathered a total of six

little feeders plus the black Moor, and started them off in a forty-long, transferring them after a few months to a 55.

I've simply been considering them a bit of nostalgic self-indulgence. Probably true, but they're still very pretty. A few weeks ago Ron Kasman and Peter Goldfien dropped by to pick up a fish of Ron's that I had been looking after while Ron and his wife were in Florida. They were of the opinion that I should

write a little article about them (the goldfish), showing what a nice-looking group of fish can be assembled for a very small price. I've been considering it for a couple of months now, and have received a couple of additional nudges about the article. Indirect, to be sure, but I didn't miss the fact that two of our most recent Undergravel Reporter essays have been about goldfish. Nudges from the universe shouldn't be ignored, after all.

There's a lot of information out there on keeping

goldfish, some of it helpful, some not, and some that's seriously misleading. Even the good information can be misleading if taken too literally. For instance, while it's true that the main feature of their diet is vegetable matter, don't assume that they won't enthusiastically eat flesh as well. They are more than delighted to come across things like

mosquito larvae, (non-toad) tadpoles, small worms, bugs, and so forth. Nevertheless, the bulk of their diet should be vegetable based, and commercial goldfish foods have reflected this through the years.

The goldfish has been selectively bred to achieve a lot of different body shapes and color patterns. The

negative side of many of these stylized body forms is their effect on the health of the fish. The bulbous bodied strains are prone to swim bladder problems, and can have difficulty swimming in agitated water. When keeping a group, the





differences in body shapes should be considered. This is a lesson I recently re-learned, to the cost of the afore-mentioned black Moor.

The exaggerated body shapes profoundly affect not only the fishes' health (swim bladder problems are not the only bane), but of course their swimming abilities as well. Watch a 'comet' swimming around, and then watch a fantail with a big belly try to swim, and it's hard not to feel sorry for the fantail. This isn't just a cosmetic problem. For instance, goldfish are egg scatterers. When the females are gravid, the eggs begin to release, and the males chase the females while trying to eat the eggs. The eggs, which are adhesive, stick to nearby objects like plants and rocks. Many are eaten by the males, who are releasing sperm as they chase the females. A female fantail simply does not have the speed and mobility to stay ahead of the pursuing males, and can be beaten up pretty badly by being driven into the substrate or aquarium decorations. This is even more a problem for the bulging-eyed varieties. Those eyes can be damaged and become infected, or even 'pop out.' So it isn't a good idea to have a mixture of body shapes in the same tank. My black Moor is a reminder of that. She's a female, and is now missing one eye; the other is quite swollen, and I'm treating her in hopes of saving the remaining eye (and keeping her alive). I've also swapped out some of the tank furniture to remove some of the obstacles to free movement.



Goldfish have also gotten a bad rap on television in recent years regarding their intelligence. I won't go into that here, but I did address it in a previous article a few years ago*. You'll also find several entries on this subject in last September's issue dedicated to fish intelligence.

All in all, there are reasons for the long-term popularity of goldfish as pets. However, a couple of caveats are in order. While you don't have to concern yourself with heaters for your goldfish tanks, a capable filtration system is a must. They're heavy-bodied fish that can grow to be fairly large, they have a big appetite, and they can and do produce a great deal of waste.

Use some judgement with tankmates. Most cichlids are not a great choice, though I used to put my *M. ramirezi* in the goldfish pond during the summer months with no apparent ill effect, and the rams really looked great by the fall. I recommend against keeping plecos with goldfish; the plecos seem to like grazing on the slime coat of the goldfish. White Clouds, which

are also cool-water fishes, are a reasonable choice, as are several other species. Do your homework on the temperature requirements and temperament of potential tankmates. Use restraint when purchasing little ones in the pet shops, because they will grow, and fairly quickly.

Photos by the author



*"Carpy Diem! Part I, The Old Guard" (**Modern Aquarium** Series III volume XVIII No. 3, May 2011)



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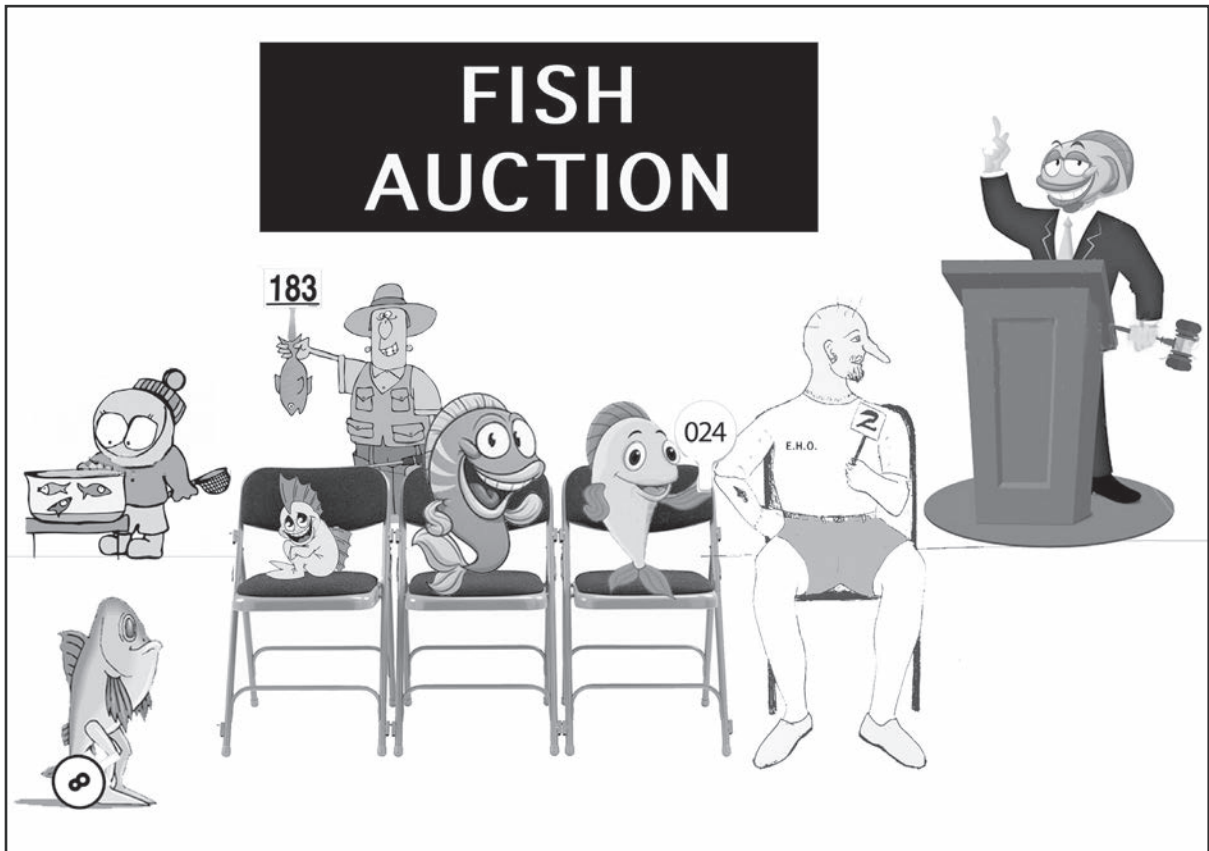
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by Elliot Oshins



The enjoyment we get out of doing different things in life is part of our everyday way of living. There are people who cannot sit still not even for one minute. Others, by the end of the day, haven't moved off the couch. I have friends that are into sports, and I even have a friend who loves to go to Atlantic City to gamble. I never ask him how he did at the tables. My passion, and the passion of some of my best friends, is tropical fish.

As a very young boy before television, my entertainment was listening to radio. Back in the "olden days," my family and I would listen to all the shows and storytellers on the radio. I used to think, "It's a movie without pictures." I would let my imagination see the pictures in my mind. There was "Uncle Don" for very young people, who aired on WOR radio five or six days a week. He would tell you "Kids, your parents left a present for you." I would listen to Uncle Don religiously every day but he never once called my house.

When I was older, I would listen to Lamont Cranston. He was known as The Shadow. The Shadow was a crime fighter and he cleaned up all the crime and the criminals in the city. A few years later the Lone Ranger was being broadcast on the radio. The Lone

Ranger was a Texas Ranger who wore a mask over his eyes and fought outlaws in the American Old West. He was my hero. The Lone Ranger rode a chestnut mare named Silver and the show always had the iconic phrase yelled by the Lone Ranger, "Hi-yo, Silver! Away!" The Lone Ranger did not work alone; his right-hand man was a Native American named Tonto. The Lone Ranger and Tonto were in the business of cleaning up the American Old West of all the bad men.

Sometime around the mid-1940s we were introduced to television (TV for short). It was a huge, heavy wooden cabinet, housing a very small black and white monitor. The picture was not too good, but we were all thrilled to see what we usually just heard.

With the passage of time, and advanced technology and engineering, color was introduced around the mid-1950s. And presto! We could now see pictures in living color!

As time went on and years passed, those very expensive (for the time) giant and very heavy TVs got larger and wider, and bigger and thinner, so much so that they are now enormous and lightweight.

Then in the 1980s we started seeing something we had only heard of—computers, and the introduction of the worldwide web, or the internet—The crystal

ball.' The great gift to mankind, as I call it. Where would we be without it?

The internet gives people vast amounts of information. You name it, it's out there. Want to learn about different fish? There are people on the internet that I call the fish actors. They will tell you how to set a tank for different types of fish. It's a fish meeting at the press of a button. You never have to leave your house. No raffles or fish auctions to travel to.

Many of us spend too much time watching TV. A lot of it is a waste of time, and to me it's all "show biz." Some people who lose their cable connections for a day and have no TV or internet, think the world is coming to an end and they're disconnected from humanity.

Those of us of a certain age all depend on TV for our entertainment. To me it's still a magic box that talks to us. It's like a magnet. Personally, I think I'm better off reading a good book. Take advantage of your public libraries. There are good books to read, and beautiful books on tropical fish.

One of my means of enjoyment is going to fish meetings and talking to members, and going to fish auctions with my friends Ed, Artie, and Rudy. Auctions are one of the best places to buy fish. The auctions run about six hours. That gives you an idea of all the fish that people bring in.

I went to a fish auction with Ed and Artie on Sunday, October 1st, in New Jersey (Rudy was away in Montauk). I've been to that New Jersey auction before, and have bought some very nice cichlids there. This last time we left at about 8:00 A.M., and our first stop was to pick up bagels and coffee.

When we arrived at the auction I bought three LED lights, and I think I made a very good purchase. I also bought a bunch of *Pseudotropheus demasoni*, a dark fish with light blue vertical stripes. A very pretty fish! I now have them in a 30-gallon tank. Any fish that you buy should be quarantined for at least two to three weeks. I'm waiting for Artie "The Maven" to transfer them to a larger tank that I've prepared for them.

At the auction, a very interesting and pretty fish came up for sale. They were in a large pail when Artie took the cover off and yelled out, surprising everybody, "These fish are worth \$100 dollars." I think they were *Cyprichromis livuac*. They sold for over \$100. Believe it or not, Big Ed bought the fish. The U.S. Supreme Court judges are experts on the law of the land. Our "Maven" is an expert on African cichlids.

By 6:00 the auction was almost over, and we were all tired from the day's events. We got into Ed's car with our purchases and "winnings," and headed back to Long Island.

One more thing—if you do acquire new fish, most of them carry parasites and should definitely be quarantined. And if you put new plants in your tanks, be sure to check for snails!



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Meeting Reminders



Almost every month at least one meeting reminder postcard is returned undelivered. Sometimes the member moved and just forgot to update his or her contact information with Greater City. Other times, well it's a mystery—the address was correct, but the Post Office marked it as “undeliverable.”

Unlike some aquarium societies, at Greater City there is never a charge for non-members to attend, there is no “bidder card fee” to bid on items in our monthly auctions, the refreshments are free to everyone at the meeting, and anyone can purchase raffle tickets. But membership does have its privileges, including this award winning magazine, door prize chances, the ability to participate in our bowl shows, and advance reminders of our meetings. If you have an e-mail account, please consider getting your meeting reminders by e-mail, instead of by postcard. You will be getting two notices (one a week in advance, the other a day in advance) instead of only one, and the chances of non-delivery are virtually none (unless you change your e-mail address). While it's a very small thing, you'll even help the environment by using less paper. An e-mail sign-up sheet is at the membership/Modern Aquarium table, or send an e-mail to gcas-webmaster@usa.net.

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- | | |
|--------------------|--------------------------------|
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| 2 CARLOTTI DEJAGER | ORCHID BLACK MALE BETTA |
| 3 WILLIAM AMELY | BLUE/RED DOUBLETAIL MALE BETTA |

UNOFFICIAL 2017 BOWL SHOW TOTALS:

WILLIAM AMELY	24	RICHARD WAIZMAN	19	CARLOTTI DEJAGER	11
JEFF BOLLBACH	5	ED VUKICH	4		

Meeting times and locations of some of the aquarium societies in the Metropolitan New York City area:

GREATER CITY AQUARIUM SOCIETY

Next Meeting: December 6, 2017

Speaker: None

Event: *Annual Holiday Awards Party*

Meets: See Flyer on page 22.

Contact: Horst Gerber (718) 885-3071

Email: gcas@earthlink.net

Website: <http://www.greatercity.org>

BIG APPLE GUPPY CLUB

Meets: Last Tuesday each month (except Jan, Feb, July, and August) at 7:30-10:00pm.

Alley Pond Environmental Ctr.: 228-06 Northern Blvd.

Contact: Donald Curtin (718) 631-0538

BROOKLYN AQUARIUM SOCIETY

Next Meeting: November 10, 2017

Speaker: Joe Yaiullo

Topic: *TBA*

Meets: 2nd Friday of the month (except July and August) at 7:30pm:

NY Aquarium - Education Hall, Brooklyn, NY

Call: BAS Events Hotline: (718) 837-4455

Website: <http://www.brooklynaquariumsociety.org>

LONG ISLAND AQUARIUM SOCIETY

Next Meeting: November 17, 2017

Speaker: Michael Marcotrigiano

Topic: *Being Judgmental: Genetics and Competition*

Meets: Olive Garden Restaurant

257 Centereach Mall,

Centereach, NY 11720 Phone: (631) 585-4027

For map directions, go to olivegarden.com/locations/ny/centereach/centereach-mall/1507.

Email: Margaret Peterson - president@liasonline.org

Website: <http://liasonline.org/>

EAST COAST GUPPY ASSOCIATION

Meets: 2nd Tuesday of each month at 8:00 pm.

Alley Pond Environmental Ctr.: 228-06 Northern Blvd.

Contact: Gene Baudier (631) 345-6399

NASSAU COUNTY AQUARIUM SOCIETY

Next Meeting: November 14, 2017

Event: NEC Presentation

Topic: *TBA*

Meets: 2nd Tuesday of the month (except July and August) at 7:30 PM

Molloy College - Kellenberg Hall ~1000 Hempstead Ave - Rockville Centre, NY

Contact: Mike Foran (516) 798-6766

Website: <http://www.ncasweb.org>

NORTH JERSEY AQUARIUM SOCIETY

Next Meeting: November 16, 2017

Speaker: Spencer Jack from Canada

Topic: *My Favorite Fish Farms*

Meets at: Days Hotel, East Brunswick NJ

Contact: NJAS Hotline at (732) 332-1392

Email: tcoletti@obius.jnj.com

Website: <http://www.njas.net/>

NORWALK AQUARIUM SOCIETY

Next Meeting: November 16, 2017

Speaker: Gary Lange

Topic: *TBA*

Meets: 8:00 P.M. - 3rd Thursday of each month except for July & December at: Earthplace - the Nature Discovery Center - Westport, CT

Contact: Sal Silvestri

Call our toll free number (866) 219-4NAS

Email: salsilv44@yahoo.com

Website: <http://norwalkas.org/>

STONED FISH

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.

Scientists in Lebanon fed Nile tilapia fish pellets laced with cannabis oil to test whether the drugs could make the fish calmer, and maybe even grow faster.¹

Tilapia is farmed intensively, and in a bid to maximize the amount of product fish farmers can bring to market, some fish pens have become incredibly congested.

Living in such close quarters can lead to all kinds of nastiness for the fish, including reduced water quality, more incidences of disease, and "increasing intraspecific interactions"—translation: fish bullying.

All of which is why it would be nice if there were something we could feed the tilapia to take the edge off. Unfortunately, the pot pellets didn't quite have the mood-altering effect the scientists had hoped for.

For starters, fish fed THC-laden edibles didn't seem to be surviving any better than fish fed a control diet. As for growth, the researchers found that feeding fish pot oil does give their metabolism a boost, but they were not given extra food to make up for this metabolic increase.

Farmers could give the fish pot and then feed them more food, but doing so would cut into profit margins, so it's unlikely that any fish farmers will be investing in the drug anytime soon.

As for the prospects of commercially available pot-reared fish, Patrick Saoud, an aquatic scientist at the American University of Beirut and lead author of the study concluded: "Until further research yields different results, we do not believe fish should be given reefer(s)."



Nile tilapia fed marijuana oil experienced distinct physiological effects.

RGB Ventures/SuperStock/Alamy Stock Photo

References

¹ <http://onlinelibrary.wiley.com/doi/10.1111/are.13512/abstract>

² <https://www.hakaimagazine.com/article-short/scientists-gave-fish-marijuana-see-if-it-would-make-them-relax>



Fin Fun

Coy Koi



Hidden below are the names of some varieties of Koi. Can you find them all?



ASAGI	KIKOKURYU	MATSUBA
CHAGOI	KIKUSUI	SHUSUI
GOROMO	KOHAKU	SORAGOI
GOSHIKI	KUJAKU	TANCHO
HARIWAKE	KUMONRYU	

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NEC Articles Competition Reprint

Our next reprint won 2nd place for the 2015 open class article titled “Easy Rider and the Foureye Butterfly Fish” by Stephen Sica. It was published within the March issue of Greater City Aquarium Society (GCAS)’s publication *Modern Aquarium*.

We intend to reprint the 1st, 2nd, and 3rd place winning entries from the Breeder Article, Junior, Humor and Open Classes categories of the NEC Articles Competitions. We will reprint in the newsletter as space permits and as we receive approval by the author or per club newsletter policy. If you have won a past NEC Articles Competition no matter how “old” and would like us to reprint it, please contact me at <mailto:bromeo1234@optonline.net>.

Thanks
 Barbara

NEC Articles Competition Winner Entry Reprint **2015 Open Class – 2nd Place Winner**

“Easy Rider and the Foureye Butterfly Fish” – Stephen Sica

