

modern AQUARIUM



December 2017
volume XXIV
number 10

Greater City Aquarium Society - New York

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Series III Vol. XXIV, No. 10 December, 2017

ON THE COVER

Our cover photo this month features a very nice-looking tank from Joe Gurrado's fishroom. For more on Joe's fishroom, see Larry Whitfield's story on page 10.

Photo by Larry D. Whitfield

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From the Editor

by Dan Radebaugh

Here we are in December, enjoying another Holiday & Awards Banquet, reviewing the past year, and looking forward to next. This has been a good year for **Modern Aquarium**. We did well in the FAAS and NEC publications competitions, and I am very pleased that we have had some very nice articles from some of our newer member-authors. Great to have, both from my own point of view as Editor, and also from that of our members. It's a terrific way to see what's going on in one another's fish tanks! That is why most of us are here, after all—to share hard-won knowledge, to learn, and perhaps to teach as well.

This is the issue wherein we reveal who has won our awards this year, whether by participating in our Breeders' Award Points program, through contributing articles and photos to Modern Aquarium, or by some other means. As you look through the awards pages, please consider that the prizes and awards, while gratifying, really serve to show us what our members are doing besides just showing up at meetings. As I look at the listing of Author Award points this year on page 28, I can't help but reflect that one of the things it shows is a really good level of participation among our members. Great work folks! Keep it up! It's fun!

Speaking of awards, this being the Editor's column, I'm going to jump the gun and tell you that our 2017 Author of the Year is Steve Sica! Congratulations, Steve, and thanks for all the fish!

Lest you think that this issue is dedicated solely to awards, we do have some new articles as well, which I hope you will enjoy and find to be of value. Steve Sica tells us about "Grand Turk's Groupers," Larry Whitfield takes us on "A Visit to Joe Gurrado's Fishroom," (Congratulations to Joe on being named Aquarist of the Year), Al Priest shows us some "Pictures From Our Last Meeting," and Leonard Ramroop tells us about platies, swordtails, and melanoma in "Myron/Mexico/Melanoma" on page 30. The Undergravel Reporter lets us in on some new revelations about fish (and octopus) intelligence, and the issue closes as usual with our Fin Fun puzzle. Also be sure to see the new Caption Contest cartoon on page 7, as well as the winning caption from last month on page 4.

A week ago or so I received an email from Linda Suppa, which I will share with you here:



Happy Holidays!

I was recently shopping, and found a set of fish cuff links. My first thought was if my dad was alive I'd buy them immediately as a Christmas Gift. I remembered from the holiday dinner that you have raffles, so I bought them and would love to donate them in honor of my dad, who enjoyed countless hours with your organization. I was just re-reading the article you printed in the November issue the year that I contacted you, and cannot believe that seven years have gone by!*

I love sharing the articles with family and friends. If you send me your address I'd be happy to mail you the cuff links.

In memory of my Dad, John Cillo, who enjoyed countless hours with the Greater City Aquarium Society. I thank you on his behalf.

Sincerely,
Linda Suppa



*Modern Aquarium Series III, November 2010, volume XVII number 11, pp 18-21



GCAS Programs

2018

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 7	Greg Steeves <i>Haplochromine Cichlids - A CARES Perspective</i>
April 4	Ted Judy <i>Colombia</i>
May 2	TBA
June 6	Rusty Wessel <i>TBD</i>
July 11	TBA
August 1	A Night at the Auction
September 5	TBA
October 3	Gary Hater <i>Goldfish</i>
November 7	TBA
December 5	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>.

President's Message

by Horst Gerber

A planned vacation kept me away from the only place to be on the first Wednesday of each month (except for January and February)—the Greater City Aquarium society, so I can't comment on our October speaker, but I would like to continue my October President's Message, but getting away from my ramblings about fall and four seasons decorating ideas. Back to our September speaker, Emily Voigt.

You ask yourself, "What does an alligator for sale on Craig's List in New York City have to do with the aquarium hobby or the red dragon, other than that the alligator would eat the arowana given the opportunity? For foodies in the USA they would constitute a very expensive meal. Of course they are by no means good eating. Rumor has it that they are very boney; who knows what they taste like? They are however, food fish in some areas. For you millionaire cat lovers out there, it would be a very pricey Fancy Feast meal!

Emily's journey began as an editorial in a magazine on the illegal pet trade in the U.S. There turned out to be no evidence of an alligator after all, but while investigating this, her interest shifted to the illegal arowana trade. These fish are legal in many countries, especially now that they are bred in captivity and implanted with ID chips. Little did she dream that this investigation would take her on a three and a half year journey to remote regions of the globe.

If you missed our September meeting, I suggest that it would be worth your while to catch her lecture at another fish club—I'm sure that with this program she will be invited to many other clubs! It wasn't the average fish club presentation. It was a fascinating travelogue that took her all over the world, from unexplored regions of Borneo to the jungles of South America, including an unexpected excursion to a remote part of Myanmar (the former Burma), where she was taken blindfolded (which must have been terrifying in itself). Talk about taking your life in your hands!

On arrival the blindfold was removed, and she found herself looking at a high concrete wall covered with razor-wire! To her surprise it was not a prison; behind that wall was a huge arowana breeding compound. There must have been hundreds of male arowanas in concrete pools carrying young in their mouths (these fish are paternal mouth-brooders).

It was indeed a privilege to hear you speak, Emily, and allow us to be part of your extremely fascinating and informative adventure! By now that arowana clock on your kitchen wall is ticking, and you are bitten by the bug! The red dragon has sunk his teeth into you and curiosity is getting the best of you, and I expect we'll hear more from you; perhaps articles on what happened to the confiscated fish. Then there is the allure of actually seeing the red dragon in nature. Emily mentioned that somebody caught one with a spoon while fishing for snakeheads in Borneo. It must have been a very large soup spoon.

Mary Poppins was right in her song, "with a teaspoon of sugar I take every medicine." If there is a report of a miniature arowana or a multi-color form endemic to one lake, you will be off on another adventure trying to get a glimpse of it. That's it! I have to start reading **The Horse Before the Glass** (Freudian slip—**The Dragon Behind the Glass**)!

Have a healthy and happy, wonderful holiday season. Hope to see you all in March!

Horst

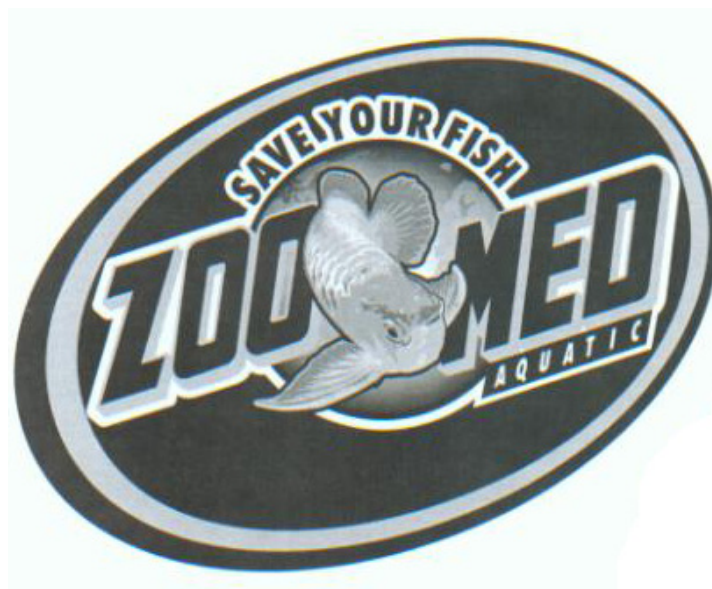


November's Caption Winner:

Al Priest



Sorry, Sir, but being late to a fish club meeting is NOT a valid reason for speeding.





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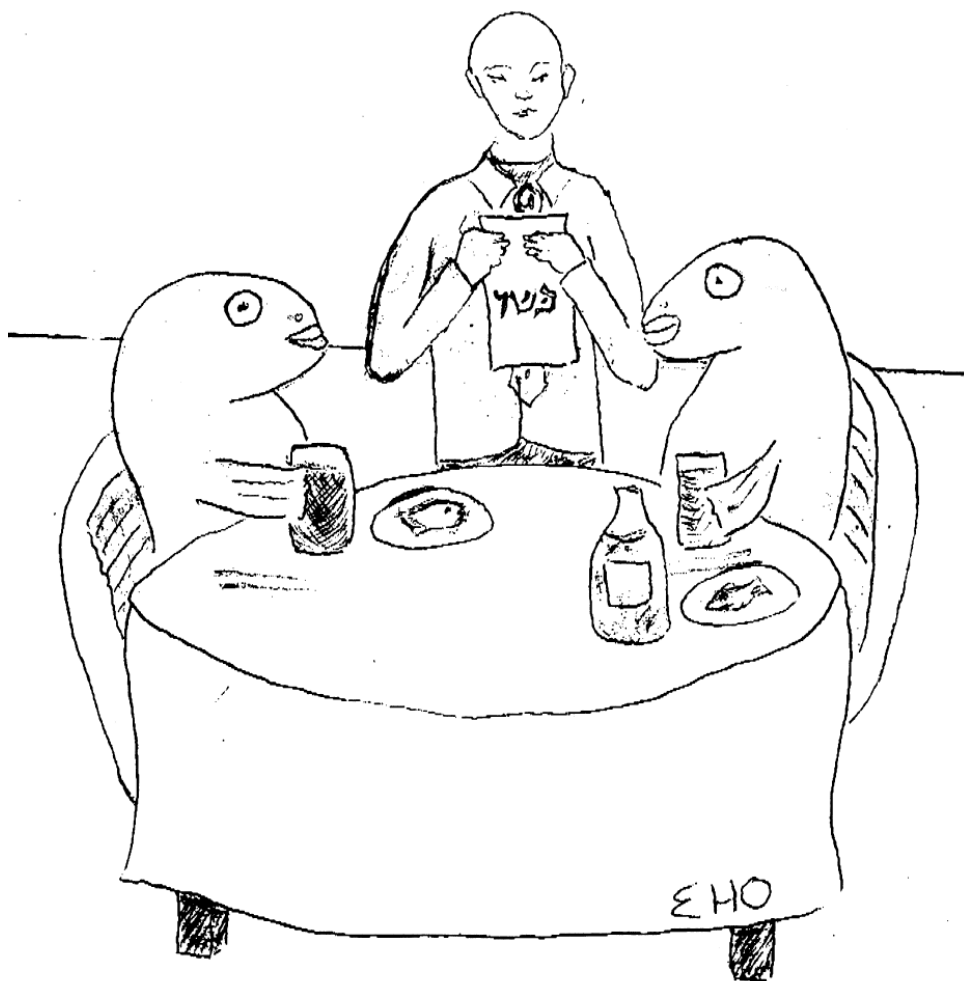
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The Modern Aquarium Cartoon Caption Contest

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:

Pictures From

Photos by Al Priest



Karen Pattist visits us via Skype with a program on koi



Dan Radebaugh and Jason Kerner put their heads together over the equipment

Bowl Show Winners:



2nd place: Carlotti DeJager



1st place: Carlotti DeJager



3rd place: Rich Waizman



Our esteemed President, Horst Gerber, is good at tooting his own horn!

Our Last Meeting



David Ramirez proudly displays his new membership card



**Door prize winner:
Donita Maynard**



How many languages do you need to speak to be an auctioneer?



A Visit to Joe Gurrado's Fishroom

Story and Photos by Larry D. Whitfield



Hello, my fellow hobbyists and friends. I hope everyone had a good weekend, and is feeling the change in the air now that fall is here and summer has left us so quickly. Well, on Monday, the 25th of September, I had the honor of visiting a good friend and fellow hobbyist of the Greater City Aquarium Society, Joseph Gurrado. I had asked him, as I have so many others, if I could visit him and see what he has done to create such a marvelous thing of beauty. I got to his home that afternoon, and he brought me through his garage and into the basement (fish room/man cave) where his fish tanks were set up.

He has ten tanks, two of which are saltwater, each with amazing systems running them, with corals and beautiful colors, and wonderful fish with bright, amazing colors as well. A few tanks were planted with what I would say looks like a jungle, so deeply rich with green, lively plants. I took some photos, but the best way for me to have everything explained, was to video everything and share all that I've seen and to let you learn how he got his wonderful fish and plants the

way they are. I found from the systems underneath the tanks to the R/O water, from the lighting to the CO₂ tanks, and the way he does all his water changes was just amazing! I also find it very interesting how each person that I've visited has different methods of doing their water changes, based on the number of tanks and differing situations.

I also liked the variety of fish Joe had in the planted tanks—from African cichlids, plecos, *Corydoras* and other types of catfish, to discus, and a flowerhorn with one of the biggest bumps on his head that I've ever seen, anywhere. When we had gone on a trip to visit Discus Hans, Joe had purchased some discus, and as you will see in the photos they are doing wonderfully. In most of his tanks he has all types of catfish—plecos from someone we both know. In my videos you will hear more about the types of fish he has in his tanks. I also like how he has planted his tanks.

Now, just to show you how much work was involved to set up his 75-gallon reef tanks, here is a list



of the items he has for maintaining this tank. The list starts with a pinpoint pH monitor. There is a reactor with carbon and GFO, a CO₂ scrubber that goes into his protein skimmer, which in turn flows into his 20 gallon sump. There are two lights (which he explains in the video) that stabilize the pH. Algae in the sump absorb the nitrates. He has an Eheim canister with a UV sterilizer connected, a couple of powerheads to produce good flow of water for the corals and sponges, and finally a 2.5 gallon automatic top-off filled with fresh water so that the tank maintains a balance of salinity. Since salt is already in the tank there's no need to add more.

Joe has a great mix of colors and types of fish. Here are some of the reef dwellers he has in the tank:

1. Green star pulps
2. Galaxy coral
3. Hairy mushrooms
4. Cabbage coral
5. Leather coral
6. Metallic green mushroom (with a feather-duster growing inside it)
7. Devil's hand coral
8. Sponges
9. Derasa clam

A few of the corals, mushrooms and other items were bought at BAS auctions. In the video, he explains the process of how all of his equipment works to run the saltwater tanks.

I would love to have everything that was explained to me in this article, but please go to the Greater City Aquarium Society Facebook page (use the link below) to view the videos. Believe me, you will enjoy them! Joe, I want to thank you once again for allowing me to come to your home and see your wonderful setup!



<https://www.facebook.com/groups/166523873457272/permalink/1348117348631246/>



Grand Turk's Groupers

Story and Photos by Stephen Sica



Donna and I pose for a photo taken by our nephew Chris James, with my camera, a Canon G9X in a Fantasea FG9X underwater case, in front of our dive boat. We relax while Smitty unloads dive gear and air cylinders before taking us back to our cruise ship.

Last November, Donna and I decided to take a four-night cruise from Fort Lauderdale to Grand Turk. It was a combination Donna's birthday and our anniversary vacation. We chose only four nights because we have separation anxiety when we have to leave our dog Cordelia behind.

We had taken four-night cruises before, and had previously visited Grand Turk. It is not a very popular travel or dive destination, so if we visit Grand Turk, we want to take a dive. Donna was unable to book the ship's diving tour, so she made arrangements with another island vendor. All twenty dive slots were filled. Our nephew Chris was diving with us, so we wanted to ensure that we would be able to dive with someone. Ironically, a day into our cruise we were notified that there were cancellations, so the ship had automatically booked us from their waiting list. This was quite a stroke of good luck. Unfortunately, we had booked and prepaid the outside vendor on-line. To say that we were annoyed and disappointed is an understatement.

This episode harkened me back to my youth in the 1970s before I met Donna. I was in Tahiti with an alumni group from my college, when I was informed that there was a day tour, aboard a small twin engine

passenger plane to Bora Bora. The cost was about \$100, maybe less. I passed because \$100 was a lot of money to me at that time, but I decided later in the day that it was highly unlikely that I would be in the neighborhood again, or even have the opportunity to visit such an exotic locale. I decided to go. "The plane is sold out," I was informed. "It only seats two dozen people." Horrors! What a fool! I have yet to be anywhere near Bora Bora again, and I think that I am running out of time.

But back to Grand Turk. Our dive boat was a twenty-four foot skiff, with its full load of eight divers, their equipment, and divemaster Smitty. I was the first to prepare myself. When I was ready and free from entanglements, I clutched my camera to my chest and did a back flip, heels over head, into the sea. The small boat was low to the water, so this is a preferred procedure to enter the water efficiently. The water was about fifteen feet deep. I swam a few yards from the boat, fiddling with my camera. When I was ready to take some photos, I looked below me. There was a mature green turtle, *Chelonia mydas*, resting on the bottom ten feet directly beneath me. I was utterly surprised! I must have done the same to the turtle, because it immediately began to rise from

the bottom. I pointed my camera right at it and fired off one quick photo before the turtle began to swim away. Green turtles weigh from one hundred to two hundred pounds. This one appeared to be in the one hundred pound range. The record is eight hundred and fifty pounds. Although green turtles are relatively common, the most popular species divers observe is the hawksbill, *Eretmochelys imbricata*. As everyone



I was totally surprised by a mature green turtle, *Chelonia mydas*, resting on the bottom directly below me in shallow water. I managed a photo as the turtle arose, before it turned away from me and swam towards the open ocean.

knows, turtles are air breathers. Some in captivity have been observed to surface for air almost every three hours. That's quite a breath holding feat!

I took a few more photos as the green turtle swam away. When I returned to the area of the boat, my companions were all in the water and ready to begin the dive. We swam along a sandy bottom towards the open sea until we arrived at the drop-off.



A most beautiful creature, this green turtle has just arisen from the shallow seafloor off Grand Turk. It swam toward the reef over a sand patch before it reached the wall and deep water. I had no time to aim my camera, and just shot by instinct. It was so close that I knew that I would photograph something. Luckily, I framed enough of the turtle!



We began our dive, swimming along a sandy bottom to the deep wall. We descended through a cut in the coral-encrusted wall. A typical deep wall is two hundred feet deep or more. Sometimes when the visibility is excellent you can see the bottom. Other times, the wall disappears into infinity. Off Grand Cayman, the walls descend for thousands of feet!



Our nephew, Chris James, swims along the wall and meets a Nassau grouper, *Epinephelus striatus*. Groupers like to hunt in groups, hence the name. Is this grouper forming a hunting pair with Chris? These groupers appear to be acclimated to divers, or maybe they just like the company.



Our boat driver/divemaster Smitty, a Grand Turk local, swims atop a Turks and Caicos wall in the company of two Nassau groupers. His long pole spear is used predominantly for lionfish. I think that the groupers are familiar with Smitty leading dive groups on the reef, and know that an occasional fish may find its way to the end of his spear and into their mouths.



Who's following whom? Trailing behind Nassau groupers like follow-the-leader, I try to catch up and photograph them from every possible angle.

We continued to descend, swam through a cut in the coral encrusted wall, and continued to deep water. Soon we were swimming along the wall at various depths. Donna prefers to stay near sixty feet. I follow the photo subjects to whatever depth that they go. Our nephew drifts deeper, and near the end of the dive he always shows me his air pressure gauge to indicate that he's running low on air. I guess he expects me to stay near him just in case. On the surface, I always tell him

to swim about ten feet higher and pay more attention to his depth. Most accidents occur by divers doing something stupid or daring, like "let's go as deep as we can," or failing to properly monitor their air supply.

Soon we were joined by two and sometimes three Nassau groupers, *Epinephelus striatus*. Two were extremely bold and continued along the wall until we swam up to the shallow reef above. I noticed that they were swimming along and into the reef with



The groupers offer an opportunistic pose as they swim alongside me. This photograph is at a distance of about ten to twelve feet.



Both Nassau groupers appear to be more than willing to allow me to swim closer. The one on the left seems comfortable as its head fills almost half of my viewfinder.



Smitty is now accompanied by three groupers swimming in formation slightly below him on his left side.



I follow a Nassau grouper that settles on coral jutting out along the reef after we leave the wall. It could be either awaiting a meal opportunity, establishing a cleaning station, or at a station awaiting a cleaning.



I follow the grouper to another section of the reef where it is surrounded by several small blue and gold cleaner fish. I wonder if they might be juvenile Spanish hogfish, but the ones in the photo appear to be too blue versus the purple coloring of the hogfish. Note the large cleaning goby, *Gobiosoma genie*, below the grouper's eye.



At the end of our dive, Smitty scours the sand for garden eels (*Heteroconger longissimus*) and conch (queen conch, *Strombus gigas*). We accidentally disturb a Southern stingray (*Dasyatis americana*) that was buried in the sand, and send it on its way.

us. Within the reef, I managed to count five groupers within our general vicinity, though I couldn't tell if they were all Nassau groupers. I tried to photograph all five, but my twenty-eight millimeter lens was not wide enough. I did capture four, but only a sharp eye would find them amidst the reef, so I did not include that photo.

Near the end of our dive, when we were back over the sandy area, Smitty began to scour the sand for garden eels, *Heteroconger lentissimus*, and conch shells. He managed to persuade a queen conch, *Strombus gigas*, to partially come out of its shell. He also caught a garden eel in his bare hands by digging his fingers through the sand. Garden eels grow between eight

and fifteen inches in length, so the eel that he caught was impressive. It's obvious that Smitty has done this many times before. It's informative and interesting, but it bothers me somewhat, since my preference is to leave the sealife in the sea, even though I have not always done so myself. With all the digging, we disturbed a southern stingray that had buried itself in the sand. It scooted away while we finished our swim back to the boat.

Smitty kindly motored all of us back to our cruise ship. Along the way we saw a beautiful rainbow, symbolizing an ideal finish to a splendid day, both on and under the sea!



In the late afternoon, Smitty drove the dive boat to our cruise ship. Looking toward the island, I noticed a rainbow. What better way is there to end a great day of diving?



Our First Aquarium Cichlid



By Albert J. Klee, Ph.D.

Photos by the author

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When I first became interested in tracing the roots of the aquarium hobby I was faced with the Gordian knot of defining terms. One of the most difficult was in pinning down the meaning of “hobby” in the aquarium context and, although it might not seem as if it would, even the definition of “aquarium” posed a problem. Indeed, the definition of “aquarium” was the subject of detailed analyses through the years by such renowned and respected figures as William Alford Lloyd (1876), Philip F. Rehbock (1980), and Stephen Jay Gould (1998). Trying to pin down a concise explanation of the meaning of a word or a term is sometimes akin to attempting to estimate the number of angels that can dance on the head of a pin! It also should be recognized that, in defining an object, the definition then limits the object, and this may have unforeseen consequences.

One way out of this dilemma is to avoid definitions and examine the major stages in the development of the aquarium hobby instead. Consequently, I was able to distinguish four such distinct events.

STAGE I started when people began to keep fish for their ornamental and entertainment value in ponds and in indoor containers, e.g., the *piscina* (from *piscis*, a fish, fish-pond, pool or basin – the term later took on different meanings) of the Romans, and the goldfish ponds of the Chinese a thousand years ago. Although the owner of any respectable Roman villa could look down on the animals in his fishpond, they could only be viewed from above through the opacity of rippled water. The same held for the indoor containers of the time since they also were opaque-sided or translucent at best.

STAGE II involved any container of glass or other transparent medium that afforded the viewing of a fish in a more direct, edge-on, eye-to-eye orientation, i.e., what we know as the “fish bowl,” although the shape of the container varied widely. The first Stage II fish keeper of record was Jeanne Rondelet, who kept a fish alive in a glass of water for three years sometime in the late 1530s or early 1540s. In the mid to late 1700s, the keeping of fish in glass containers became fashionable in Great Britain and included such illustrious personages as Horace Walpole, the 4th Earl of Oxford.

The aquarium craze of the mid 1850s in Britain brought on STAGE III of the aquarium hobby, characterized by the interpretation of the aquarium as a minirepresentation of a small portion of some natural

aquatic environment (the marine aquaria of the time, for example, were frequently referred to as “parlour” oceans), an availability of books on the subject, and the existence of commercial establishments supplying fish and equipment.

Finally, towards the end of the Twentieth Century STAGE IV appeared, i.e., the notion of aquarium societies, exhibitions, and competitions, all strengthened by improved communication through the appearance for the first time of aquarium magazines, advances in travel, and the changing nature of cities.

Although Jeanne Rondelet kept a fish alive in a glass of water for three years in the Sixteenth Century, I doubt that most readers would agree that this established the aquarium hobby in France at that time. When one talks about the aquarium hobby, therefore, it makes sense to think in terms of Stage IV of the hobby. An interesting case in point, therefore, is in determining the first aquarium cichlid. If we restrict ourselves to the aquarium hobby (*sensu* Stage IV) then it is clearly the Chanchito, *Cichlasoma facetum*. If, on the other hand, we are seeking the first cichlid kept in an aquarium then the field is wide open. Some writers (e.g., Geerts, 2005) erroneously assign it to the Orange Chromide, *Etroplus maculatus*, but they are thousands of years off, as well as missing the correct fish!

It is well documented that the Egyptians kept fish in aquaria, and hieroglyphics in the tombs of the Pharaohs very clearly describe the farming of tilapia in ancient Egypt. In the mid 1970s I travelled extensively in Egypt and observed and photographed many of the hieroglyphics depict-

ing fishes. The accompanying figure shows line drawings taken from some of them. The six in the lower left corner are drawings of a tilapia, the last showing it in a vessel of some sort, i.e., an aquarium.

The ancient Egyptians kept fish for food, to be sure. However, large quantities of fish bones have been found at various archaeological sites in Egypt and, given the fact that the bones were found in accordance with the real animal shape, it is certain that the animals were deposited while still in the flesh and therefore played a religious role.

Oddly enough, the Egyptians had opposing views regarding fishes. They were often considered as unclean animals and were forbidden as offerings and food to kings, gods, and the priesthood. When the cult of Osiris became popular, fish were identified with his evil brother Seth, the god of chaos and confusion, since (according to Plutarch) people believed that the Nile Carp (*Lepidotus*) had eaten the phallus of the dismembered Osiris. Therefore, on certain feast days fishes were burned and trampled underfoot as an offering.

On the other hand, despite the belief of those just cited, fishes were often regarded as sacred animals. The elephant fish, *Sternarchorhynchus oxyrhynchus*, for example, was considered to have been created out of Osiris' wounds. This fish was also connected to the important goddess Hathor and also acted as a pilot fish for the solar bark of the sun god, Ra, warning of the approach of the snake Apophis during the sun's voyage through the underworld. The tilapia also seems to have been a manifestation of Ra. As aquarists well know, a mouthbrooder, it keeps its fertilized eggs in

A List of all fish documented from excavations in Egypt (after Boessneck, 1988)

1 Bichir, <i>Polypterus bichir</i>	23 <i>Schilbe mystus</i>
2 <i>Mormyrus caschive</i>	24 Nile Catfish or Hog Catfish, <i>Bagrus docmac</i>
3 <i>Mormyrus kannume</i>	25 <i>Bagrus bayad</i>
4 <i>Mormyrops anguilloides</i>	26 <i>Auchenoglanis occidentalis</i>
5 <i>Gnathonemus cyprinoides</i>	27 <i>Chrysichthys auratus</i>
6 <i>Hyperopisus bebe</i>	28 <i>Chrysichthys rueppelli</i>
7 <i>Hyrocyon forskali</i> (= <i>Hydrocinus forskali</i>)	29 <i>Synodontis schall</i>
8 <i>Alestes dentex</i>	30 <i>Synodontis batensoda</i>
9 <i>Alestes baremose</i>	31 <i>Synodontis membranaceus</i>
10 <i>Disticodus niloticus</i>	32 <i>Synodontis serratus</i>
11 <i>Citharinus citharus</i>	33 <i>Synodontis frontosus</i>
12 <i>Citharinus latus</i>	34 <i>Synodontis sorex</i>
13 <i>Barbus bynni</i>	35 <i>Malapterurus electricus</i>
14 <i>Labeo niloticus</i>	36 <i>Mugil capito</i> (= <i>Liza ramada</i>)
15 <i>Labeo horie</i>	37 <i>Mugil cephalus</i>
16 <i>Labeo coubie</i>	38 Nile Perch, <i>Lates niloticus</i>
17 <i>Labeo forskalii</i>	39 <i>Tilapia nilotica</i> (= <i>Oreochromis niloticus</i>)
18 <i>Clarias lazera</i> (= <i>Clarias gairepinus</i>)	40 <i>Tilapia galilaea</i> (= <i>Sarotherodon</i>)
19 <i>Clarias anguillaris</i>	41 <i>Tetradon fahaka</i>
20 <i>Heterobranchus logifilis</i>	42 <i>Sparus aurata</i>
21 <i>Heterobranchus bidorsalis</i>	43 <i>Morone punctatus</i> (= <i>Dicentrarchus punctatus</i>)
22 <i>Eutroplus niloticus</i>	44 <i>Johnius hololepidotus</i> (= <i>Argyrosomus regius</i> = <i>Sciaena aquila</i>)

Reprinted from **iCichlid** – 44:05 November 2015; Victorian Cichlid Society Incorporated. Originally appeared in **Buntbarsche Bulletin**, official publication of the American Cichlid Association Inc (ACA). To join the ACA contact Claudia Dickinson, ACA Membership Coordinator, PO Box 5078, Montauk, NY 11954 // ivyrose@optonline.net, 43081 Bond Court, Sterling Heights, MI 48313, or visit the ACA website: cichlid.org.

its mouth until they are fry and then spits them out. It therefore appears to be swallowing and then “giving birth” to them and, as such, is therefore a symbol of rebirth. Furthermore, this fish was associated with fertility and had a strong erotic connotation. To offer a tilapia, for example, was considered as an invitation to love.

Arthur E. P. B. Weigall (2005) writes that 3000 years ago, an Egyptian man wrote this poem about his home:

Its fields are full of good things and it has provision for every day.

Its granaries overflow ... they reach the sky.

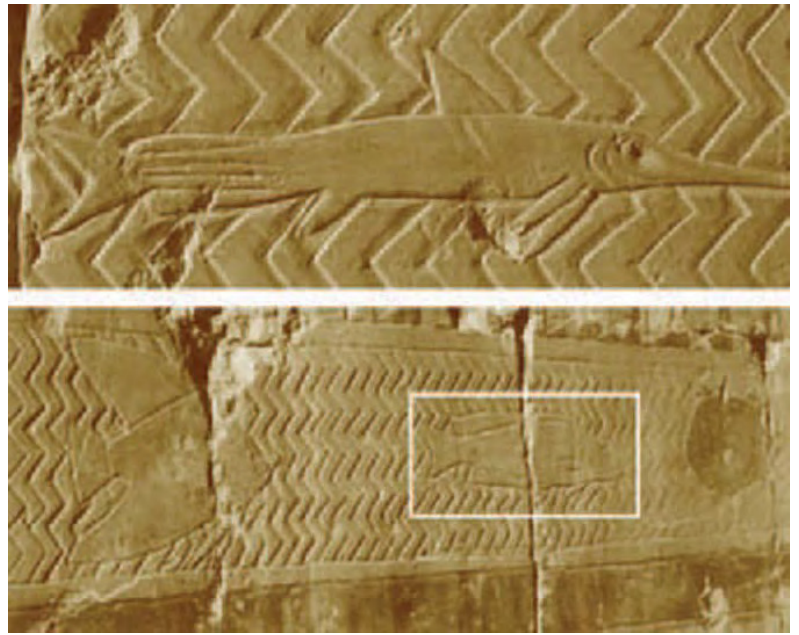
Its ponds are full of fishes and its lakes of birds.

Its fields are green with grass and its banks bear dates.

He who lives there is happy and the poor man is like the great elsewhere.

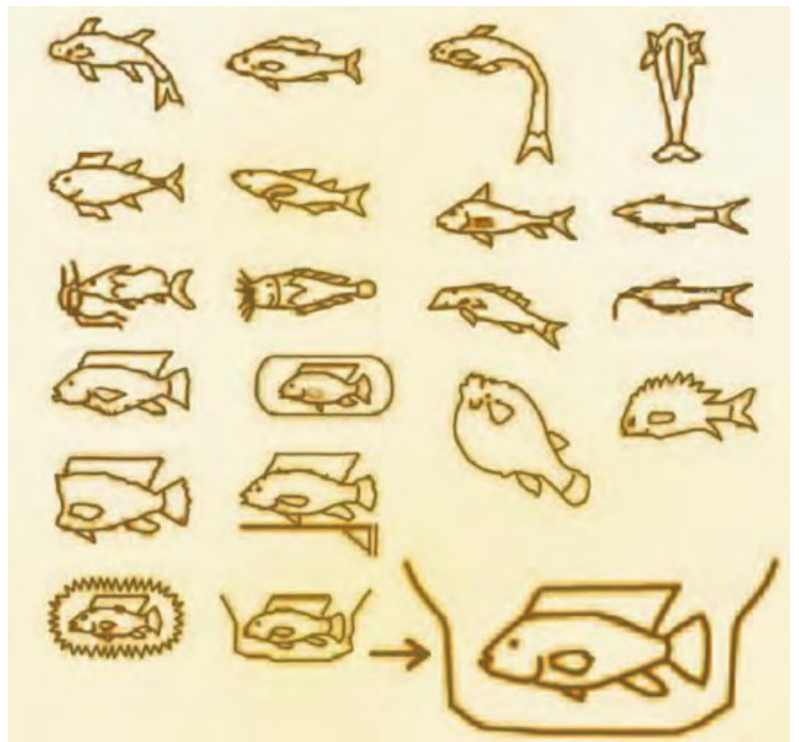
These ponds certainly contained tilapia, but which tilapia?

The accompanying table lists the fish species documented from excavations in Egypt. The table is based on archaeological investigations related to cultural studies that, in contrast to the antiquarianism of classical archaeology, are concerned with the explanation of cultural processes such as foods eaten and animals domesticated or farmed. The table is interesting in that it contains some very familiar aquarium fishes, e.g., elephant fishes, the bichir, labeos, a barb, and a host of well-known aquarium catfishes. Included are two species of tilapia – *Tilapia nilotica* and *T. galilaea*. It is often assumed that the tilapia shown in Egyptian hieroglyphics is *T. nilotica*, but as it is not possible to distinguish between the two species by looking at the hieroglyphs,



Fish hieroglyphics from ancient Egypt.
A Tilapia is shown within the white frame in the lowermost image.

A sample of fish hieroglyphics taken from Egyptian tombs.
The six in the lower left corner depict Tilapia, and the last (magnified to the right) shows it in a vessel of some sort.



it is therefore not certain which of the two is our first aquarium cichlid. As the reader can appreciate, nailing down these “firsts” is not an easy task nor is it always possible.

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GCAS Past Award Winners

JOSEPH FERDENZI ROLL OF HONOR

Gene Baiocco	Charles Elzer	Ben Haus	Susan Priest	Mark Soberman
Joe Bugeia	Joe Ferdenzi	Emma Haus	Herman Rabenau	Dan Radebaugh
Mary Ann Bugeia	Warren Feuer	Jack Oliva	Marcia Repanes	Marsha Radebaugh
Dan Carson	Herb Fogal	Al Priest	Nick Repanes	
Claudia Dickinson	Paul Hahnel		Don Sanford	

DON SANFORD BREEDER OF THE YEAR

1981-83	Ginny & Charlie Eckstein	1992-93	Steve Sagona	2002-05	Anton Vukich
1983-85	Rich Sorensen	1993-94	Joe Ferdenzi	2006	Warren Feuer
1985-86	Yezid Guttierrez	1994-95	Steve Sagona	2007, '08, '09, '10	Jeffrey Bollbach
1986-87	Joe Ferdenzi	1995-96	Tom Miglio	2011, '12, '16	Joseph Graffagnino
1987-88	Patricia Piccione	1996-97	Mark Soberman	2013	Leslie Dick
1988-89	Joe Ferdenzi	1997-98	Jeff George	2014	Mark Soberman
1989-90	Francis Lee	1998-'00	Tom Miglio	2015	Artie Platt
1990-91	Eddie Szablewicz	2000-01	Mark Soberman		
1991-92	Dominic Isla	2001-02	Alexander Priest		

GENE BAIOTTO AQUARIST OF THE YEAR (Since 1990-91)

1990-91	Diane & Harold Gottlieb	2003-04	Jack Traub
1991-92	Doug Curtin & Don Curtin	2004-05	Claudia Dickinson
1992-93	Warren Feuer	2006	Anton Vukich
1994-95	Steve Sagona	2007	Ed Vukich
1995-96	Alexander & Susan Priest	2008	Al Grusell
1996-97	Joe Ferdenzi	2009	Dan Radebaugh
1997-98	Claudia Dickinson	2010	Pete D'Orio
1998-99	Vincent & Rosie Sileo	2011	Jeffrey Bollbach
1999-00	Pete D'Orio	2012	Jules Birnbaum
2000-01	Bernard Harrigan	2013	Dan Puleo
2001-02	Joe Ferdenzi	2014	Leonard Ramroop
2001-02	Jason Kerner	2015	Alexander & Susan Priest
2002-03	Carlotti De Jager	2016	Elliot Oshins

WALTER HUBEL BOWL SHOW CHAMPIONS (Since 1983-84)

1983-84	Tom Lawless	1994-95	Carlotti De Jager	2006-07	Ed Vukich
1984-85	Tom Lawless	1995-96	Mary Eve Brill	2008	William Amely
1985-86	Joe Ferdenzi	1996-97	Steve Sagona	2009	Mario Bengcion
1986-87	Joe Ferdenzi	1997-98	Steve Sagona	2010	Alexander A. Priest
1987-88 (tie)	Mark Soberman	1998-99	Tom Miglio	2011-12	Richard Waizman
	and Mary Ann & Joe Bugeia	1999-2000	Tom Miglio	2013	Jerry O'Farrell
1988-89	Jason Ryan	2000-01	Pat Coughaine	2014	Ruben Lugo
1989-90	Eddie Szablewicz	2001-02	William Amely	2015-16	Richard Waizman
1991-92	Steve Sagona	2002-03	Evelyn Eagan		
1992-93	Steve Sagona	2003-04	William Amely		
1993-94	Steve Sagona	2004-05	Evelyn Eagan		

GCAS PRESIDENTS (Post 1945 — number in parenthesis = consecutive terms)

1946-49	Elliott Whiteway (4)	1968-70	Walter Hubel (2)	1981-84	Brian Kelly (3)
1950-51	Robert Greene (2)	1970-72	Dave Williams (2)	1984-86	Jack Oliva (2)
1952-53	Robert Maybeck (2)	1972-73	Dan Carson (1)	1986-97	Joe Ferdenzi (11)
1954-55	Leonard Meyer (2)	1973-75	Herb Fogal (2)	1997-99	Vincent Sileo (2)
1956-57	Sam Estro (2)	1975-76	Richard Hoey (1)	1999-00	Jeff George (1)
1958	Leonard Meyer (2+1)	1976-77	Ted Tura (1)	2000-08	Joe Ferdenzi (11+8)
1959-64	Gene Baiocco (6)	1977-78	Gene Baiocco (6+1)	2009-16	Dan Radebaugh (8)
1965	Andrew Fazio (1)	1978-79	Louis Kromm (1)	2017	Horst Gerber
1966-68	Charles Elzer (2)	1979-81	Don Sanford (2)		

Greater City Aquarium Society 2017 Awards

To be awarded December 6, 2017

GENE BAIOTTO AQUARIST OF THE YEAR AWARD

JOSEPH GURRADO

DON SANFORD BREEDER OF THE YEAR AWARD

JOSEPH FERDENZI

WALTER HUBEL BOWL SHOW CHAMPION

WILLIAM AMELY

BREEDER AWARD PROGRAM (BAP) AWARDS

Greater City aquarists who received BAP points during 2017, *and* who moved up to a new **BAP** level are:

Edward Vukich.....Senior Grand Master Breeder
Dan Radebaugh.....Breeder

AUTHOR AWARD PROGRAM (AAP) AWARDS

Greater City Authors who made contributions printed during 2017, or who received AAP points as a result of NEC and/or FAAS publication awards announced in 2017, *and* who moved up to a new **AAP** level are:

Jules Birnbaum.....	Senior Laureate	Ruben Lugo.....	Journalist
Jeffrey Bollbach.....	Writer	Dan Radebaugh.....	Senior Laureate
Xavier Deng.....	Author	Stephen Sica.....	Senior Grand Master Laureate
Joseph Gurrado.....	Columnist	Gilberto Soriano.....	Writer
Denver Lettman.....	Essayist	Larry Whitfield.....	Correspondent

Stephen Sica is Author of the Year for 2017!

GCAS BREEDER AWARD PROGRAM 2017

<u>NAME</u>	<u>SPECIES BRED</u>	<u>Points</u>	<u>1st - GCAS</u>	<u>CARES</u>	<u>DATE</u>
JOSEPH FERDENZI	CERT #				
	1950 <i>CORYDORAS PANDA</i>	15			3/1/2017
	1955 <i>SPECTROLEBIAS RETICULATUS</i>	20	✓		7/5/2017
	1956 <i>XIPHOPHORUS MAYAE</i>	10	✓		7/5/2017
	1957 <i>PACHYPANCHAX SP. "SOFIA"</i>	10			7/5/2017
	1958 <i>NOTHBRANCHIUS GUENTHERI</i>	10			7/5/2017
	1959 <i>JULIDOCHROMIS ORNATUS</i>	15			7/5/2017
	1960 <i>FUNDULOPANCHAX GARDNERI</i>	5			7/5/2017
	1961 <i>EPIPLATYS ROLOFFI</i>	35	✓	♥	7/5/2017
	Number of species: 8	Total Points		120	
JOSEPH GRAFFAGNINO	1951 <i>AMANTITLANIA SIQUIA</i>	10			3/1/2017
	1952 <i>LIMIA SP. "MIRAGOANEASIS"</i>	5			3/1/2017
	1953 <i>PRISTELLA MAXILLARIS</i>	20	✓		3/1/2017
	1954 <i>FOSSOROCHROMIS ROSTRATUS</i>	20	✓		5/3/2017
	1967 <i>NANOCHROMIS PARILUS</i>	10			7/5/2017
	Number of species: 5	Total Points		65	
DAN RADEBAUGH	1968 <i>ASTRONOTATUS OCCELATUS SP "RIO ARAQUAIA"</i>	20			11/1/2017
	Number of species: 1	Total Points		20	
MARK SOBERMAN	1962 <i>CORYDORAS DIPHYES</i>	25	✓		7/5/2017
	1963 <i>CORYDORAS BICOLOR</i>	25	✓		7/5/2017
	1964 <i>HYPHESSOBRYCON WADAI</i>	25	✓		7/5/2017
	1965 <i>XIPHOPHORUS KALLMANI</i>	5			7/5/2017
	1966 <i>XIPHOPHORUS SP. "GUENTHERI"</i>	5			7/5/2017
	Number of species: 5	Total Points		85	

✓ indicates first recorded breeding of the species in the GCAS Breeders Award Program

♥ indicates a species at risk that is listed in the C.A.R.E.S. Preservation Program



GCAS

Breeder Award Totals

<u>NAME</u>	<u>POINTS</u>	<u># BRED</u>	<u>NAME</u>	<u>POINTS</u>	<u># BRED</u>
1 JEFF BOLLBACH	1,695	124	38 LOUIS KROMM	170	16
2 JOSEPH GRAFFAGNINO	1,620	113	39 JEFF GEORGE	165	17
3 JOSEPH FERDENZI	1,170	76	40 LESLIE DICK	160	8
4 MARK SOBERMAN	1,030	56	41 DICK MOORE	160	5
5 WARREN FEUER	915	61	42 JEAN BRAUDE	155	12
6 ANTON VUKICH	910	70	43 BARRY LYNCH	150	18
7 TOM MIGLIO	865	66	44 SHARON MIRABELLA	135	10
8 EDWARD VUKICH	800	56	45 THADDEUS TURA	135	9
9 STEVE SAGONA	655	47	46 JOE CUCINIELLO	135	9
10 JOHN STORA	540	47	47 JORGE RODRIGUEZ	135	9
11 JOSE ARANDA	505	47	48 HARRY EVANS	125	11
12 JOHN IANNONE	485	45	49 KEN BRUST	120	15
13 THE ECKSTEINS	455	39	50 FRANK GANNON	120	16
14 CARLOTTI DE JAGER	440	33	51 JERRY SCHULTZ	120	11
15 CLAUDIA DICKINSON	435	27	52 THE KELLYS	115	12
16 RICHARD SORENSEN	420	33	53 GEORGE MAROTI	115	8
17 FRANCIS LEE	390	28	54 JOE MANCUSI	115	8
18 GERALD GORYCKI	370	41	55 HERB FOGAL	100	13
19 CHARLEY SABATINO	360	20	56 JERRY MAYER	95	7
20 THE REPANES	355	27	57 JOE FLANAGAN	95	12
21 JACK OLIVA	345	42	58 DENNIS EGIELSKI	95	4
22 HAROLD KETTERER	335	30	59 BRIAN KELLY	90	6
23 AL PRIEST	330	8	60 PETE D'ORIO	90	9
24 THE LOMBARDIS	325	32	61 ROBERT MC KEAND	85	5
25 GREGORY WUEST	310	30	62 EDWARD SZABLEWICZ	85	7
26 DON SANFORD	310	25	63 NOEL RODRIGUEZ	85	7
27 TED KURDZIEL	295	24	64 BOB KUHLE	80	7
28 TONY FERRARO	275	23	65 LEONARD RAMROOP	80	11
29 THE BUGEIAS	270	31	66 BRADLEY PLOTKIN	80	6
30 DOMINIC ISLA	235	20	67 JOHN LEE	75	5
31 STEPHAN ZANDER	230	14	68 DOUGLAS CURTIN	75	12
32 ARTIE PLATT	210	16	69 JOSE PEREZ	75	6
33 YEZID GUTIERREZ	206	20	70 TOM BOHME	75	7
34 PHILIP INGENITO	205	13	71 BOB RADAMACHER	70	9
35 ROD DU CASSE	190	14	72 DONALD CURTIN	70	10
36 THE DONATONES	175	18	73 PAT PICCIONE	70	7
37 JOHN MORAN	170	11	74 SARA MONHEIT	65	6

NAME	POINTS	# BRED
75 CHARLES KUHNE	60	8
76 JOEL FORGIONE	60	4
77 DAN RADEBAUGH	60	4
78 BOB DU BOIS	55	5
79 HORST GERBER	55	4
80 BOB WRANOVICS	50	4
81 MIKE CASSANO	50	5
82 WARREN BURKE	45	7
83 BRUCE WEILER	45	3
84 WILLIAM BRANDOFINC	45	4
85 CHARLES SHATAKA	40	5
86 CHARLES BENEFATTI	40	7
87 BRIAN STERN	35	4
88 ARTHUR MAYER	35	3
89 BARRY CENTER	35	3
90 THE MARTINS	35	5
91 VINNIE RITCHIE	35	3
92 AL PHANEUF	35	5
93 BRUCE WELLER	30	3
94 MICHAEL VILLANO	30	4
95 ROGER BEAULIEU	30	2
96 THE STEGMANS	30	3
97 ROB ALTONEN	30	2
98 GENE BAIOTTO	30	4
99 STANLEY WEGLARZ	25	4
100 VINCENT BABINO	25	2
101 EMMA JORDAN HAUS	20	3
102 DANNY SHEPARD	20	3
103 GUNTER HORSTMANN	20	3
104 STEVEN MILLER	20	1

NAME	POINTS	# BRED
105 PETER SCHLEISMAN	20	2
106 ARNOLD FREED	20	4
107 STUART KRICHEVSKY	20	3
108 JOE ARONNE	15	2
109 IGNACIO ARENCIBIA	15	1
110 THE FERNANDEZES	15	1
111 WILLIAM SADERA	15	1
112 DAN GAWIAK	15	2
113 KATHY BUSBY	10	1
114 ABE COOPER	10	2
115 BILL ARONNE	10	1
116 RICH LEVY	15	2
117 DIANNE SPELLMAN	10	1
118 JOHN MC CAFFERY	10	2
119 JERROLD MEYER	10	1
120 HORST MIEHLBRAD	10	1
121 FRANK FALLON	10	1
122 WALTER ROSTOWSKI	10	2
123 JASON KERNER	10	1
124 JAY LIEBOWITZ	5	2
125 ADAM KLEINROCK	5	1
126 EDYTH MONSOUR	5	1
127 KATHY FERNANDEZ	5	1
128 THE QUINNS	5	1
129 WILLIAM STALZER	5	2
130 JAMES BROOKS	5	1
131 RICHARD WALSH	5	1
132 BILL SMITH	5	1
133 DANNY CIRNIGLIAR	5	1
134 GEROLD COCH	5	1



GCAS Author Award Program

We are always very pleased to welcome new names to our member/author list, and you will see a few new names once again this year, including (once again) some youthful contributors.

Quite a few of our authors have moved up the ladder this year in our Author Award points rankings. Congratulations to Jules Birnbaum, Jeff Bollbach, Xavier Deng, Joe Gurrado, Denver Lettman, Ruben Lugo, Steve Sica, Gilberto Soriano, and Larry Whitfield for achieving their new titles. As our authors move up the ladder in terms of recognition, the steps become taller, so it's good to see so many moving up this year in so many categories. Special congratulations are due to our **Author of the Year** for 2017, Steve Sica! **Modern Aquarium** is primarily the product of our members. We are grateful for every article and photo from every member, and we hope to hear more from each of you in 2018!

Overview of the Author Award Program

The GCAS AAP awards points for contributions to **Modern Aquarium**. Persons acquiring a specified number of points will receive additional recognition in the form of a certificate for having reached designated Accomplishment Levels. (See "**Accomplishment Levels**.")

Each person making a qualifying contribution to **Modern Aquarium** receives points, as well as chances for a **Prize Drawing** at the Annual Holiday Party.

Eligibility

Any member of Greater City who makes a contribution to **Modern Aquarium** is automatically a participant.

Points

Five points will be awarded for an original article of 500 words or less.

Ten points will be awarded for an original article of 501 words and over.

Five points will be awarded for an original photograph, drawing, or illustration submitted with, and as part of, an original article. If more than two photographs, drawings, or illustrations are submitted with a related article, only two will be given points (this is in addition to the points awarded the article, based on its size).

Ten points will be awarded for an original color photograph that is used on the front cover. Photographs must be the work of the member submitting them, and must not have been previously published, or submitted for publication, in any commercial or amateur publication.

Two or more related photographs or illustrations submitted with captions, and occupying one or more pages, will be counted as two photos (10 points) and as an article over 500 words (10 points), for a total of 20 points. An example would be a photo spread with captions.

An original article on a fish in the **C.A.R.E.S.** Preservation Program will receive **double points** (i.e., 10 points for an article of 500 words or less, and 20 points for an article of 501 words or more). Photos and drawings of a **C.A.R.E.S.** eligible species will also receive double points.

Five points will be awarded for an original puzzle which is used on the "Fin Fun" page of **Modern Aquarium**.

Ten points will be awarded to the winner of our Cartoon Caption Contest.

Points are awarded only once for an article, drawing, puzzle, or photograph. No points are awarded for subsequent reprints, regardless of whether the original article was awarded points previously in the AAP. To be eligible for AAP points, a contribution must first have been submitted to **Modern Aquarium**. However, if an article previously published in **Modern Aquarium** is significantly revised by its author (as a result of new information or developments), and if such a revision is first submitted to **Modern Aquarium**, it will be treated as a new article. Points are awarded in the year the article is printed. Editorials and President's Messages are excluded.

An article deemed unacceptable by the Editorial Staff of **Modern Aquarium** for reasons of appropriateness of topic, suitability, or possible violations of copyright or libel laws, will be ineligible for participation in the GCAS AAP. Decisions of the Staff are final.

Points credited to an author may not be carried over or credited to subsequent calendar years for the purposes of raffle prize chances or "Author Of The Year" designation.

Bonus Points

If, in the year following its publication in **Modern Aquarium**, an article is given a 1st, 2nd or 3rd place award by the North East Council of Aquarium Societies ("NEC") or by the Federation of American Aquarium Societies ("FAAS"), an additional 10 points will be awarded if the author is a GCAS member in the year the NEC or FAAS award is announced. This applies only to articles (not to drawings, columns, cartoons or photos). These bonus points are credited in the year that the award is announced, not the year for which it is awarded.

Prize Drawing

For every 5 AAP points earned in a calendar year, the recipient is given one chance in our "Authors/Contributors Only" raffle.

Author of the Year

The person with the most points in a calendar year receives a certificate as "**Author Of The Year**" for that year. This is our most prestigious award, and the winner truly exemplifies the high value which they place on the contribution of experience and knowledge to the aquarium hobby at large.

Accomplishment Levels

For the accomplishment levels specified below, points are cumulative over the life of the AAP program.

¹Points are **doubled** for each article on a fish in the C.A.R.E.S. Preservation Program.

²Points are **doubled** for each photo or drawing of a C.A.R.E.S. fish used on the cover.

³**Bonus points** are awarded to participants for awards (other than Honorable Mention) received from the Federation of American Aquarium Societies (FAAS)

Publication Awards, and The Northeast Council of Aquarium Societies (NEC) Article Awards, in the year these awards are **announced**, not in the year for which they are awarded.

⁴**Modern Aquarium** staff members are ineligible for the Raffle. Family members of staff ARE eligible.

Author	25 to 45 pts
Correspondent	50 to 95 pts
Writer	100 to 145 pts
Essayist	150 to 195 pts
Journalist	200 to 295 pts
Columnist	300 to 495 pts
Laureate	500 to 745 pts
Senior Laureate	750 to 995 pts
Master Laureate	1,000 to 1,495 pts
Grand Master Laureate	1,500 to 1,995 pts
Sr. Grand Master Laureate	2,000 to 10,000 pts
Editor Emeritus	over 10,000 pts

Continues on next page

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2017 Totals	Art Work (in points)	Number of Articles ¹		Awards	Total Points	Prize
Author	Photo/ Drawing (up to two per article) ²	500 Words Or Less	Over 500 Words Or Caption Contest Winner	Bonus ³ Points	Current Year Total March to December	Raffle ⁴ Chances

Bill Amely	0	1	0	0	5	1
Jules Birnbaum	65	2	2	10	105	21
Jeffrey Bollbach	10		1		20	4
Wallace Deng	5				5	1
Xavier Deng	20				20	4
Leslie Dick			1		10	2
Rita Dunne			1		10	2
Joseph Ferdenzi	25	2	2	30	85	17
Joseph Graffagnino	10	1			15	3
Joseph Gurrado	110	0	1		120	24
Andrew Jouan	5				5	1
Denver Lettman			1		10	2
Ruben Lugo	95				95	19
Jerry O'Farrell	60	2	0		70	14
Elliot Oshins	70	0	4	30	140	28
Alexander A. Priest	150	1	5		205	n/a
Susan Priest	60	3	5	40	165	n/a
Dan Radebaugh	20	1	1	50	85	n/a
Marsha Radebaugh	10	0	1		20	4
Lauren Ramroop	5	0	0	10	15	3
Leonard Ramroop			1		10	2
Stephen Sica	120	0	11		230	46
Gilberto Soriano	50				50	10
Undergravel Reporter	0	10	0		50	n/a
Ed Vukich		2			10	2
Tom Warns		1	1		15	3
Ron Webb	15	1	0		20	4
Larry D. Whitfield	20		1		30	6

Following are the total AAP points for all GCAS members as of December 2017. If you have questions, or feel that there are errors, please contact Dan Radebaugh.

Shunmugan Al	40	Mario Bengcion	15
Tamer Altan	5	Steve Berman	25
Bill Amely	115	Jules Birnbaum	985
Sharon Barnett	30	Tom Bohme	15
Fred Bellise	10	Victoria Bohme.	25

Jeffrey Bollbach	140
Roger Brewster	10
Tommy Chang	105
Donald Curtin.	10
Doug Curtin	90
Carlotti De Jager	30
Adrian Deng	10
Wallace Deng	120
Xavier Deng	50
Les Deutsch	5
Leslie Dick.	55
Brad Dickinson	20
Claudia Dickinson	3,195
Al DiSpigna	5
Pete O'Orio	5
Rod Du Casse	5
Rita Dunne	10
Evelyn Eagan	25
Frank Fallon	65
Harry Faustmann	50
Anita Ferdenzi	15
Francesca Ferdenzi	5
Joseph Ferdenzi	1,770
Marisa Ferdenzi	20
Alison Feuer	5
Warren Feuer	305
Michael Foran	25
Artie Friedman.	15
Peter Foster	10
Mike Gallo	10
Jeff George	165
Horst Gerber	150
Linda Gerber	10
Steve Giacobello	15
Joseph Graffagnino	300
Steve Gruebel	10
Al Grusell	25
Joseph Gurrado	590
Bernard Harrigan	1,800
Steven Hinshaw	165
Andrew Jouan	40
Jason Kerner	140
Charlie Kuhne	10

Denver Lettman	150
Rich Levy	105
Bill Luckett	10
Ruben Lugo	275
Beth Macht	10
John Malinowski	5
Desiree Martin	45
Tom Miglio	25
Jackleen Minassi-Haftvani	20
Temes Mo	5
Jerry O'Farrell	280
Elliot Oshins	800
Jim Peterson	5
Margaret Peterson	10
Artie Platt	20
Alexander A. Priest	4,040
Susan Priest	3,720
Dan Puleo	135
Dan Radebaugh	820
Marsha Radebaugh	320
Jannette Ramirez.	220
Lauren Ramroop	30
Leonard Ramroop	45
Mark Rubanow	5
Charley Sabatino	170
Donna Sosna Sica	10
Stephen Sica	2,220
Vincent Sileo	50
Danielle Soberman	5
Ilyssa Soberman	15
Robin Soberman	10
Mark Soberman	75
Gilberto Soriano	115
Jack Traub	20
Undergravel Reporter	1,590
Anton Vukich	5
Ed Vukich	95
Michael Vulis	50
Tom Warns	15
Ron Webb	35
Larry Whitfield	60
Greg Wuest	25



Myron/Mexico/Melanoma

by Leonard Ramroop

Dr. Myron Gordon was one of the most significant figures in our hobby in the past century, but many hobbyists today only know him from the many **TFH** books he authored. Myron was a hobbyist in his youth, and kept the very fish he would later study (Kallman 2001). He graduated Cornell University in 1929 with a doctorate in biological science. He worked at the Museum of Natural History, the New York Zoological Society, and The New York Aquarium (1939-1959). In 1939 he established the *Xiphophorus* Genetic Center, a genetic fish bank that included many of the strains he collected. The New York Aquarium became the second home of the XGC, followed by Texas State University at San Marcos.

During his undergraduate and graduate careers, Dr. Gordon studied the platy and its close relative, the swordtail. His main focus of study was the dark pigmentation that some swordtails and platies possess. His research took on more significance when it was discovered that hybrids of these fish produced offspring with melanoma. At the same time a Dr. Curt Kosswig (Kallman 2001) and others also began similar research on these fish in Germany.

Platies and swordtails are found in Mexico and in certain parts of Central America, and are unique to these regions. Dr. Gordon made many collecting trips to Mexico (1930-1939) in order to collect new fish. One trip in particular (1932) was partially funded by local aquarium clubs in New York, including our own Greater City Aquarium Society. This collecting trip was known as the Cornell University Mexico Expedition (Kallman 2001). The clubs hoped that when Dr. Gordon returned he would have new species which their members would have access to. He collected *X. montezumae*, *X. cortezi*, *X. variatus*, and the unidentified 'pygmy swordtail.' In 1963 this new swordtail was given the name *Xiphophorus gordonii* in his honor.

Dr. Gordon's special interest was the pigmented spots that some platies and swordtails have on their bodies. Dr. Gordon hybridized the swordtail with the platy, and found something unusual in the offspring. Some of the F generations produced fish that had deformities on their fins and bodies. These turned out to be melanomas, and Dr. Gordon concluded that this was caused by a specific sex-linked gene called

a macromelanophore (Gordon 1937). A smaller autosomal (recessive trait), micromelanophore also existed, but did not cause melanoma (Gordon 1958). Dr. Gordon concluded that the platy was responsible for the melanoma expression because it possessed both micro and macro melanophores.

The swordtail only had genes for micromelanophores, which Gordon believed could not cause this disease (Gordon 1958). At the same time Dr. Curt Kosswig concluded that the melanoma was indeed hereditary (Kallman 2001). Platies and some swordtails have natural dark pigments (spots) throughout their bodies, and possess a gene that controls their

shapes, sizes, and numbers. These pigments would be either dark or olive green in color (Gordon 1937), and are present in a few spots or congregated on one portion of the body. Gordon stated that if the parental platies are homozygous for the macromelanophore (SpSp), the hybrid offspring would express melanosis (Gordon 1937). If the parental maculatus is heterozygous for this trait (Spsp) half of the F1 generation would express melanomas (Gordon 1937).

The gene that regulates pigment production goes unregulated, unsuppressed, or was absent in some of the F hybrids. According to Gordon, the platy possessed a gene for melanoma as well as one to suppress it. The swordtail genome on the other hand, apparently lacked this suppression gene, and Gordon concluded that when this gene was expressed melanoma occurred in hybrid offspring. He also believed that many swordtail species lacked this gene, and melanoma expression occurred in F hybrids due to the lack of a suppressor gene. The present-day term used for *Xiphophorus* hybrids is the 'Gordon-Kosswig cross.'

Dr. Gordon was also uncertain as to whether wild population of platies developed melanomas. More recent studies by Ohio University show that some swordtails do in fact develop melanomas in the wild (Fernandez, Morris 2008), and some genetically possess the melanoma trait. Female swords prefer males with darker markings, and males have the ability to enhance pigment color in order to attract and mate with females. Some of the males became larger, more pigmented, and aggressive in their behavior in order to attract mates. A darker phenotype also proved to be more attractive to possible mates. Fernandez and Morris concluded that a specific gene not only increases the pigments in swordtails, but also enhances the



development of melanoma in this species. Swordtail and platies in some populations have genes that can code for melanomas. The incidence of melanoma expression increases exponentially when hybrids are produced. Platies in certain populations have an oncogene and suppressor loci, while the swordtail either lacks it, or it has been turned into a dormant recessive trait (Scarpino et al 2013)

Both populations come in contact with each other in the wild, and sometimes hybridize (Scarpino et al), and each has a coping mechanism for melanoma expression (Fernandez and Morris 2008). Natural selection in some cases prevents them from passing on this allele. However, wild populations can still retain many recessive genes that can code for melanoma. In some instances these genes do combine in an embryo and are eventually expressed in some wild fish.

In 2013 Samuel V. Scarpino (University of Texas at Austin) and other investigators studied the *Xiphophorus* melanoma receptor kinase gene (xmrk). This is the gene that codes melanoma in *Xiphophorian* fishes. The investigators also state that a repressor gene, *cdkn2a/b*, also existed in the *Xiphophorus* genome. This gene (*cdkn2a/b*) is responsible for blocking expression of the xmrk. The xmrk oncogene is the same one that Gordon called the macromelanophore. Scarpino et al emphasized that not all *Xiphophorus* species have this gene (xmrk), and that natural selection and mating preferences influenced its expression. The researchers confirmed Kosswig's notion that melanoma was inherited (sex linked xmrk gene). The investigators also validated Gordon's earlier assumptions that the gene was either absent or dormant

in many *helleri* species (Scarpino et al). Scarpino et al state that "not all *Xiphophorus* species have a copy of the xmrk locus, and it has been gained and lost multiple times." The authors also emphasize that this xmrk gene came about when the genus expanded and became an "epidermal growth factor gene" during this period of species differentiation (Scarpino et al 2013).

Ultraviolet exposure from the sun on these fish has been studied. Some *Xiphophorus* fish in past generations possessed melanin and only expressed them as needed. Subsequent generations either expressed, suppressed (dormant), or eliminated this gene. A decrease in protective melanin on the scales could have contributed to an increase incidence of melanomas in future generations. Many hobbyists may remember a fish called the black Jet swordtail, a red fish with a distinctive half black body extending to the sword. This fish developed growths and deformities in its pigmented portion, and in some cases developed melanoma. It was a beautiful fish, but was never bred in large numbers because of its disposition to diseases.

Dr. Gordon established the *Xiphophorus* Genetic Stock Center in 1939 to preserve the genetic lineage of his platys and swordtails. After Gordon's passing in 1959, Dr. Klaus Kallman continued his work and preserved his legacy. The Center eventually moved to Texas State University-San Marcos, where it presently houses many *Xiphophorus* species for ongoing research. We hobbyists owe a great debt to Dr. Gordon, not only for creating the myriad types of swordtails we have today, but as a true pioneer in the battle against cancer.



Swordtail drawing by Lauren Ramroop

References: Klaus Kallman. "How the *Xiphophorus* Problem Arrived at San Marcos." **Marine Biotechnology** 2001.

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The Melanoma Cell and Incompletely Differentiated Pigment Cell Genetics Laboratory New York Zoological Society 1958

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Color Patterns and Gene Frequencies in Natural Populations of a Platyfish: Hugh Gordon and Myron Gordon Columbia University and New York Zoological Society April 1950

The production of Spontaneous Melanotic Neoplasms in Fishes by Selective Matings: Myron Gordon Cornell University Zoological Laboratory June 1937

Max K. Hecht. Queens College Department of Biology, City University of New York

Wikipedia



GCAS Classifieds

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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.

Fishy Friends' Photos

by Greater City Aquarium Society Fishy Friends

***B**elow 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!*



Gilberto Soriano



Jerry O'Farrell



Joe Gurrado



Ruben Lugo



Joe Gurrado



Ruben Lugo



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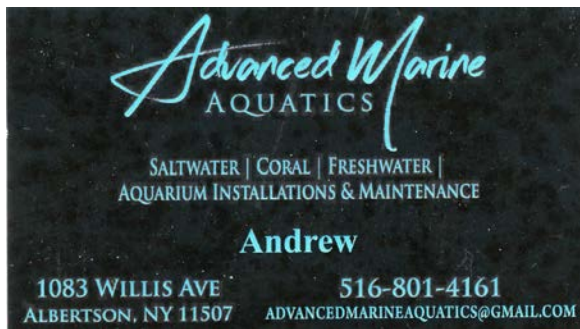
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GCAS Happenings

December

Last Month's Bowl Show Winners:

1 CARLOTTI DEJAGER	KILLIFISH
2 CARLOTTI DEJAGER	PLAKAT SHORT-FIN BETTA
3 RICHARD WAIZMAN	BLUE HALF-MOON BETTA

OFFICIAL 2017 BOWL SHOW TOTALS:

WILLIAM AMELY	24	RICHARD WAIZMAN	20	CARLOTTI DEJAGER	19
JEFF BOLLBACH	5	ED VUKICH	4		

A VERY WARM WELCOME TO NEW GCAS MEMBER DAVID RAMIREZ!

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

GREATER CITY AQUARIUM SOCIETY

Next Meeting: March 7, 2018

Speaker: Greg Steeves

Topic: *Haplochromine Cichlids - A CARES Perspective*

Meets: The first Wednesday of each month (except January & February) at 7:30pm:
Queens Botanical Garden

43-50 Main Street - Flushing, NY

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: December 8, 2017

Speaker: None

Event: *Holiday Party*

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: January 19, 2018

Speaker: Ali Stevens

Topic: *Hurricane Sandy Made for Happy Clams*

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: December 12, 2017

Event: *Holiday Party*

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: January 20, 2018

Speaker: Dr. Paul Loiselle "Compact CA Cichlids" and Kevin Carr "Giant CA Cichlids"

Meets at: Clark Public Library in Union County, just off the Parkway at exit 135

Contact: NJAS Hotline at (732) 332-1392

Email: tcoletti@obius.jnj.com

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

NORWALK AQUARIUM SOCIETY

Next Meeting: January 18, 2018

Speaker: *TBA*

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/>

A Grouper With Eight Hands!

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.

While back, **Modern Aquarium** devoted almost an entire issue to "fish intelligence." I recently found an article on the website of the British newsletter **The Telegraph** titled "Fish 'could be as intelligent as primates', scientists predict, as Blue Planet II footage shows collaboration with octopus to hunt."¹

Filmmakers shooting on the Great Barrier Reef for the BBC series **Blue Planet II** captured an octopus and grouper fish communicating and collaborating to catch prey. Grouper and octopus hunt the same small fish which dart in and

out of the coral, and often hide in crevices too small for the grouper to enter. But the larger fish has come up with an extraordinary solution. After chasing a fish into a crevice, it turns slightly paler to attract the octopus' attention, before standing on its head and wiggling its tail to signal that a meal is hiding in the hole. For its part, the octopus pokes its long, thin tentacles into the crevice, flushing out the prey.

Sir David Attenborough, who narrates the series, said: "The fish takes fright and swims straight into the grouper's jaws. Sometimes the octopus gets the reward, sometimes the grouper does. These very different species have discovered that teamwork brings success."

Scientists now think the partnership between the grouper and octopus, which involves rudimentary sign language, shows intelligence which could rival that of crows or even chimpanzees, our closest relative.

Dr Alex Vail, a Cambridge University scientist turned cameraman, who led crews to the spot after witnessing the behaviour said: "When I first saw it, I was blown away. What's fascinating is there seems to be intention behind it. The grouper has formulated a plan and is aware of what the outcome might be, and then carries it out which shows a similar level of intelligence as chimpanzees, and that's without anything like the same brainpower. We have seen grouper do similar headstand signaling and shimmying

to attract the attention of moray eels, but the eels often don't quite get what they are supposed to do. And the grouper sometimes has to go and nudge it in the right direction. You don't have that with the octopus.

It knows what's going on and it's

straight over, which actually makes it harder to film."

Think about it—they (the fish in our tanks) far outnumber us. What if they conspired together. Scary thought!



A coral grouper on the Great Barrier Reef in Northern Australia with an octopus Credit: BBC

Reference:



Fin Fun



Winter Words

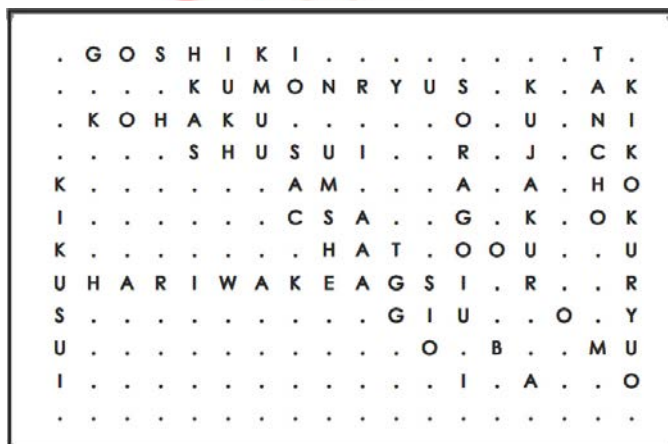
It's December (if you're reading this at our annual Holiday Party and Awards Banquet). See if you can match the common name of some winter-themed fish with their scientific name.

Common Name	Scientific Name
Snow pleco	<i>Pseudopleuronectes americanus</i>
Peppermint goby	<i>Gymnogobius castaneus</i>
Chestnut goby	<i>Coryphopterus lipernes</i>
Treefish	<i>Benthodesmus elongatus</i>
Candle hap	<i>Stigmatochromis pholidophorus</i>
Cookie cutter shark	<i>Euleptorhamphus viridis</i>
Frostfish	<i>Isistius brasiliensis</i>
Ribbon halfbeak	<i>Sebastes serriceps</i>
Winter flounder	<i>Pterygoplichthys anisitsi</i>
Nutcracker pricklyback	<i>Bryozoichthys lysimus</i>

Source: <http://www.fishbase.org/search.php>

Solution to our last puzzle:

Coy Koi





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Contact

GIAS Organizing Committee

Contact person: Mandy Tsang

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