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The Lateral Line



December 11, 2005

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Upcoming Events:

• HCCC January meeting time and date TBD.

Cover Photo: Tropheus sp. Red Nkamba Bay Clilanga by Jennifer Prince

BAP Report

The November BAP news is one of reorganization. Jim (Bristlenose) is officially the new BAP chairman and will be doing the monthly BAP news for the Lateral Line as well as overseeing all BAP business. I will be assisting Jim where needed. I would like to thank Jim for relieving me so that I am free to work on some other club projects that I haven't been able to make the time for.

Jim has been hard at it already. We should see his revision of the rules and guidelines posted this month. This was badly needed as the BAP was pieced together over the first year of our existence. Having everything in black and white, readily accessible will help all

participants. Instead of going into some of the revisions, I will leave that for Jim to post in next months Lateral Line and on the HCCC website. From what I have seen, Jim is striving to simplify the process both for the BAP management but also for participants in the program.



There are a number of pending reports that were to go good in November. Due to our preoccupation with reforming the BAP program, they have not yet been looked at. For those of you who have pending reports, fear not, they will be attended to shortly (certainly by the next Lateral Line). The regular Year to Date reporting will also return in the next issue of the LL.

For our second month in a row, Diane leads the 2006 BAP race with 30 points.

On behalf of the entire club, thanks again Jim. You've taken on a big job and we look forward to seeing the results of the changes.

Greg Steeves

HCCC Monthly Photo Contest



First Place: Carla Grosvenor I love this tank. And this is an excellent photo, but I would crop it closer to not see the tank edges. But I am no fish photo expert J The background is awesome...this tank owner needs to write an article on how he/she did it. My backgrounds are heavy they are called "real rocks" most of my own tanks subscribe to the GAS theory of aqua cape design, 15 gallons of rock in a 20 gallon tank!

Second Place: Jennifer Prince So close... second is good, but kinda like kissing a canuck. This tank has great potential to me...but needs to decide what it wants to be...shell dwellers? I love those but try to show them too. And I would lose the pumps for the photo but once again I am no fish photo expert. With my imagination I can see the plants maturing and little shell dwellers dancing through the roots... with some slightly larger Neolamprologus living in the rocks for population control. J I said I like a balanced tank!





Third Place: Jennifer Prince The fact that this is probably the best photo in the contest makes it third in the aquarium beautiful contest. This tank looks to me like it is a young one. So with my imagination I can see the plants covering the rocks and baby brichardi trying to survive in the roots. Can you see it too?

Judging & Comments by Bob Nuckols

Species Profile: Thorichthys meeki

Common names: Firemouth cichlid, Firemouth, redbreasted cichlid.

Described: Brind, 1918

Synonyms: Thorichthys helleri meeki, Cichlasoma meeki, Herichthys meeki, Cichlasoma hyorhynchum

Family: Cichlidae

Care: pH range: 6.5 - 7.5; 26-30°C (78-86°F)

Distribution: Central America: Atlantic slope, in the Usumacinta River drainage, the Belize River drainage, and near Progreso, in Mexico, Guatemala and Belize. There are populations that stay alive in Hawaii and Florida. This is most likely hobbyists releasing them or escapees from fish farms.

Max. size: 17 cm (6 ¹/₂")

Sexing: Sexing is difficult. Both sexes have a bright red underside that is usually more intense on males. Males will also usually have more pointed and longer dorsal fins. Males are frequently larger in body.

The preferred habitat for Thorichthys meeki is the lower and middle area in a slow moving river. The bottom of the river is often mud or sand covered. It will stay close to the shoreline vegetation for protection.

When firemouths are ready to spawn, they often spawn in conjunction with several neighboring pairs of firemouths (if any other pairs are available). Males will clean the area, often a rock or flowerpot. The female then lays up to 300 eggs. This depends on the size of the female. After approximately 2 days the eggs hatch. The wigglers will stay dependant on their yolk sac for another 4-7 days. They then become free swimming. This is when they can be fed. Good food sources for baby firemouths include crushed flake, daphnia, microworms and baby brine shrimp. The parents guard the fry during this time. They also will find food for the fry if possible.

Meeki seem quite aggressive, but they really aren't. It's all a bluff! If another fish doesn't believe the threat and still goes for the firemouth, the firemouth will swim away. The firemouth does look quite intimidating to other fish. This is because of the spots on their gill covers. When a meeki flares it's gills at other fish, these spots become visible from the front of the fish, and it appears that the firemouth is much bigger than it actually is. This generally means that if your aquarium is of a decent size then you can keep tetras, and other smaller fish in with them (as long as they don't fit easily in their mouths!).

I received my fish as very young fry barely past the freeswimming stage approximately 7 years ago. They were brought to me as a special gift from my friend Juan Miguel Artigas Azas who collected the parents himself from Laguna de las Ilusiones in the lower Grijalva river system at Villahermosa, Tabasco, Mexico. They were placed in a 20 gallon bare tank with a sponge filter. I then was attending ACA after that, and no one was available to feed them, but when I got back, they were fine, and in fact had grown some. I assume they ate small creatures from the sponge filter in the meantime. After they got some real growth on sive in it. They spawned a few times in the tank, but as I didn't have spare room for Thorichthys fry, I didn't save them. Several years passed and I lost one of the original pairs. I think it was a female. The solitary male also developed a white eye. I suspect he can still somewhat see out of that eye, but not very well.



Photo by Lisa Boorman

them, I ended up giving some away as I didn't have room for them all. I ended up with 2 gorgeous pairs. They were in a 90g tank with several Satanoperca leucosticta. One of the pair spawned in there. I raised up some of these fry and sold them or gave them away to friends.

After this, I needed the 90 for something else, and the firemouths had no place to be. I then placed them into a 225 gallon Malawi tank. I only placed them in there as they were adult sized, and the 225 had nothing super aggres-

I got to thinking that it had been a long time since they spawned for me in the 225g tank and I realized how long I had them, and thought that if I wanted to continue them, I better get some more fry from them. This was about the time my outdoor pond was warm enough to put some fish in it. The pond itself is not all that large. It is approximately 150 gallons. I caught all 3 adult Thorichthys meeki and placed them into the pond around the mid-

dle of July. This pond has no filter. There are lots of plants in there though. I also added a few gouramies. I added a few broken clay flower pots for them to spawn on. Within a

Lisa's Lair Bookstore Online Books Various Discounts for HCCC Members www.lisaslairbookstore.com few days, there were eggs on one of the pots. They spent the rest of the summer guarding their fry in the tank from the gouramies and the spare male. In early September, when the temperature was starting to cool down at night, I went and removed as many fry as I could find. I got approximately 20 of them. The next weekend I went and got the parents, and discovered I had not caught all of the fry out the first time. I got another 20 or so and they all went inside. The fry to their own tank and the parents are back into the 225g. The pond was not fed by me all summer so all the fish in the pond survived on whatever insect or algae they could find. They did not destroy any of my pond plants. The fry are now nicely growing on a diet of microworms, baby brine shrimp, small flake and some small pellets.

I highly recommend these fish, especially if you can find the highly coloured specimens. They have a good personality and do well in large community tanks. They must be firstrate fish if I've kept them for 7 years!

Lisa Boorman

Species Profile: Metriaclima estherae

Metriaclima estherae or Red Zebra, is a maternal mouthbrooder native to the rocky habitat of Lake Malawi, Africa. The climate is sub-

tropical with temperatures in the mid 70's to 80's and native waters for this fish are pH of 8.0. I obtained 3 3.5 inches long fish from Erik Dyke. Males achieve a size of 5 inches and are almost albino in coloration, sort of peachy pinky orange with light blue highlights in the fins. Females achieve a size of 5



Photo by Diane Tennison

The fish bred in a 55 gallon tank which contained pool filter sand and was decorated with large black rocks. The tank was filtered by a

> Emperor 400 and an Eheim 2026 and had a pH of 8.0. I performed weekly water changes equal to 25% of the tank volume. I used fluorescent lighting for a duration of 14 hours each day. I fed the fish NLS, Dainichi, and Mysis shrimp.

When spawning, the blue highlight color of the

inches and are bright solid orange almost reddish orange. male intensifies. The female stayed a bright orange but then became dull after spawning The Male cleared off a corner of the tank. Next, the female laid an egg and picked it up in her mouth. The pair assumed a "T" position and the female then bit at the egg spot of the male fertilizing the eggs.

The pair laid approximately 15 eggs. After spawning, the female retreated to a hiding



Metriaclima estherae OB Photo by Greg Steeves

place to avoid harassment by the male. After a couple of weeks I stripped the female then returned her to the main tank. Approximately 15 eggs representing 100% of the total hatch were

viable and hatched after two weeks. The fry still had some yolk sac left but the fry were already orange in color and free swimming.

The fry didn't require any special care on my part. I put them in a 10 gallon tank in a breeder box until they got some size to them. The tank used an Aquaclear 20 for filtration. Once the female released the fry, she did not exhibit any tendency to care for the fry. I started the fry off on Cyclop-Eeze. After two weeks I started feeding NLS growth. The fry grew quickly.

This is a very prolific fish that becomes very aggressive during breeding and is best kept in a tank with other aggressive fish. This is a very beautiful fish that I had in a tank with haps and peacocks. I have since moved this

fish out because they were way to aggressive for the tank and stressing my other fish. A very easy to keep fish that grows quickly and whose babies are born with color. I would recommend this fish for any mbuna tank or species only tank but be careful with other tank mates.

Be prepared to deal with very aggressive males and offer lots of cover both at the bottom and top of the tank. Males will attack brooding females, so is best to

remove her to a separate tank. Despite these challenges, you should give this fish a try.

Ryan Robinson

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Species Profile: Neolamprologus brichardi

Neolamprologus brichardi or AKA Brichardi or "The Princess of Burundi", is a substrate spawner native to the rocky shoreline of Lake Tanganyika, Africa. The climate is sub-tropical with temperatures in the mid 70's to 80's and native waters for this fish are pH of 8. 6 - 9.1. I obtained 12 brichardi of mixed sizes and ages from Diane Tennison (gryhouse). Both males and females achieve a size of 4 inches. Fins are tipped in white and speckled yellow with a

lyre shaped long flowing tail. Head is flecked with blue and yellow. A black T shaped marking is formed from the gill plate to the eye. A bright yellow dot is located at the top end of the gill plate. Eyes are crystal blue in color. . Females look much like the males except the male may



Photo by Jennifer Prince

weeks equal to 30 - 40% of the tank volume. SeaChem Tanganyika Buffer as well as Lake Salts was added to maintain a high pH and hardness. I used power compact lighting on a timer for duration of 10 hours each day. I fed the fish NLS Cichlid Formula & Freeze Dried Krill.

No marked change in spawning colors. Breeding was not observed. Eggs were laid on the

> underside of a small cave. These were only discovered after some tank maintenance exposed the nesting area. The same day the eggs were noticed, they disappeared. Not sure if they hatched or if the parents moved them. At first, I thought they had been eaten. 6

have a slight hump on the top of the head and the female may be smaller in size.

The fish bred in a 45 gallon tank which contained Aragonite Seaflor Special Grade Reef Sand and was planted with Hornwort, Anubias Nana, and several types of Java Fern. The tank also contained quite a bit of limestone rock forming many large caves. The tank had a pH of 8.4. I performed water changes once every 2 days later, fry were observed around the mouth of the largest cave.

The pair laid approximately about 50 copper colored eggs. Both male and female cared for the eggs with the male acting as primary caregiver. No change in care was required. Approximately 46 eggs representing most if not all of the total hatch were viable and hatched after an unknown hatching time. The fry were a clear white color and about 1/4 of an inch long.

The fry didn't require any special care on my part. I left them in the 45 gallon tank with the other inhabitants which included other brich-

ardi, a baby red-eared slider turtle, several small

Alto.compressiceps, and bristlenose plecos. Once the eggs were hatched the fry were accepted into the brichardi community. Both parents took active roles in caring for the fry. The male's aggressiveness and strength is

clearly demonstrated defending breeding territory from a turtle as well as other inhabitants. All threatening tank mates but one other male brichardi vying for dominance quickly got the message to leave this spot alone. He took refuge in the floating hornwort to recover.

The male took a stronger care giving role defending the nest and fry than that of the female. Many of the brichardi would come and inspect the nest and also keep a watchful eye on the newly hatched fry. It almost seemed like an open house party. Once the fry were free swimming, the male made a point to screen the opening of the large cave with unplanted narrow leafed java fern. He would drag it from across the tank and place it around the opening. The fry stayed close to the cave opening for the first few days and have ventured out into the main tank within a week. This is the first spawn for me as well as for this group of brichardi. It has been fun watching them interact as a community and observing their parental behaviors. It is said that brichardi breed like rabbits (or rats) but it

is their strong bond to family that helps ensure survival of their offspring. I look forward to seeing how the fry grow and also how their behavior affects the next spawn. They are a great beginner fish especially for someone interested in breeding.

Offer heavily planted or protective areas for ousted tank mates. Floating plants like hornwort work great for offering a refuge. A larger tank than needed is a good thing to keep in mind - lots of babies will be coming along shortly.

■ Jennifer Prince

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Photo by Diane Tennison

Interview with Hernán López-Fernández

A special thanks to Dr. Hernán López-Fernández for taking the time to judge our October photo contest and answering some questions. Hernán López-Fernández received his Ph.D. from the Texas A&M University. His specialties are in Systematics and Evolutionary Biology & Neotropical Ichthyology with emphasis on Cichlids. His work has included integrating molecular and morphological evidence to reconstruct the phylogeny of Neotropical cichlids. He is also known for his extensive work with Geophagus cichlids.

Interview with Hernán López-Fernández

By Yvonne Beever

Yvonne: How did you become interested in cichlids?

Hernán: The first cichlids I ever saw were a pair of Heros severus that my father bought for our home aquarium. He bought them really small and they grew to be huge fish. I got so excited about the severums that I wanted to start

my own aquarium. After some months with swordtails and platys, the pet shop owner, who was a fan of cichlids, convinced me and a friend of buying a pair of Texas cichlids. We did, and after a couple of females being horribly killed by the male, we finally got them to spawn and reared nearly 800 babies. After that, I could never leave cichlids alone.

Yvonne: You recently discovered three

new species of *Geophagus*. Can you tell us what that was like to discover new species and to name them?

Hernán: It is quite exciting to find a new species, especially after you spend a long time convincing yourself that it is actually new. The worst you can do is giving a second name to something that was already described... that would be a headache for taxonomists that work after you. Finding an appropriate name can be really difficult. Not only is it hard to come up with an idea for a name, but because the names have to follow Greek and Latin rules of construction, it is a challenge to find the correct way to spell a new name. That said, finding new species of fishes is not an uncommon thing, and many ichthyologists name new species along their careers, even if the main focus of their research is not taxonomy.

Yvonne: Why are these species important to

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1058 N. Business 35 New Braunfels, TX (830)629-1191 maintaining a stable ecosystem?

Hernán: The truth is, we don't know how they affect the ecosystems where they live, but several aspects of their biology suggest they may be quite important. They are fairly abundant and relatively large fish that feed on large amounts of invertebrates from the substrate of rivers and lagoons. They feed by taking mouthfuls of sand or mud from the bottom and sifting it through the gill basket to retain invertebrates while expelling the sand. By doing this, they remove large amounts of invertebrates from the bottom, thus affecting the substrate community and probably influencing the abundance and distribution of many invertebrates. Geophagus also mobilize large amounts of substrate, which may have effects on the organic sediment that accumulates on the bottom and may alter the dynamics of the so-called "lower food web", which is very important in nutrient cycling through the entire aquatic ecosystem. Some of my colleagues at Texas A&M University are actually studying the effect that substratefeeding fish can have on the food web and nutrient cycling of rivers in South America.

Yvonne: What draws you to (or interests you about) *Geophagus*?

Hernán: *Geophagus* is one of 18 genera in the subfamily Geophaginae. I am interested in the incredible variety of associations between morphology and ecology among geophagines and other Neotropical cichlids. These fishes have evolved a remarkable diversity of feeding modes and habitat preferences, as well as a variety of reproductive modes that are only equaled by the cichlids from the African Great Lakes. This diversity apparently evolved very fast (in evolutionary time, that is), through a process known as adaptive radiation. This type of radiation offers biologists the opportunity to understand how ecology influences diversification and the origin of new species. The study of adaptive radiations could provide fundamental understanding of the mechanisms that originate biodiversity, and that is the focus of my research.

Yvonne: What species of Geophagus are appropriate for aquariums? Are these fish only suitable for experienced aquarists or can beginners keep them?

Hernán: I am ashamed to confess that I don't know very much about keeping *Geophagus* in aquaria. We used to keep and breed some *Geophagus* while I was a student at Texas A&M. From that experience I can say that they are hardy fish, but they need good water quality (slightly acidic, soft) with excellent filtration because they eat a lot. They love frozen bloodworms, but I seem to remember

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\$59 flat shipping —No minimum orders www.africancichlidcentral.com that, after they are used to it, they'll eat pretty much anything. Thomas Weidner's book "South American Eartheaters" is an outstanding guide to the large-bodied geophagine cichlids, and I seriously recommend it for anybody thinking of keeping them in their tanks.

Yvonne: What do you have planned for future research?

Hernán: My colleagues and I are working on the phylogeny of the genera of South and Central American cichlids, and we will use it to study the evolution of their ecology and morphology. We are also working on studying convergent evolution between substrate-sifting cichlids of South and Central America. I am working on the species-level phylogeny and developing a project to study mechanisms of speciation in a few genera of geophagines, and describing a few new species.

Yvonne: Do you have any advice for novice aquarists?

Hernán: Try to learn more than the basics about your fish. Learn how and where they live, and try to recreate those environments at home. Try to get fishes that have been bred in captivity or that you know have been collected legally and safely. Keep in mind that some of the rarest and more beautiful species are also some of the least known and sometimes in higher risk of becoming threatened by unsustainable harvest. Many species of cichlids, especially those from Madagascar, are extremely endangered or extinct in the

wild; keeping and breeding a few of those species can make a great contribution to their conservation. You can get more information about programs to breed threatened species from the American Cichlid Association. Finally, but extremely important, NEVER release any of your aquarium fishes in local ponds, streams, or rivers. These introduced species can become serious threats to native species of fish and other aquatic fauna. Some of the fishes here in Texas are seriously endangered, sometimes because of exotic fish introductions. For example, the Devils River minnow (Dionda diaboli) may be disappearing from San Felipe Creek in Del Rio (one of only four creeks where it lives) after a population of aquarium-released plecos started breeding in the Creek.

More information on Hernán López-Fernández can be found at his website: http:// wfsc.tamu.edu/winemiller/lab/ Lopez_main.htm

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Species Profile: Harpagochromis sp. "golden duck"

The genus Harpagochromis was erected in 1896 by G. J. Pfeffer. The Harpagochromis name is rooted in Greek. "Harpage" means robber while "chromis" denotes color. The basic cues which differentiate Harpagochromis from other cichlids of haplochromine lineage include body shape, dentition, and feeding strategies.

The Harpagochromis contains a number of species and all are piscivores. Many Harpagochromis species are now listed as extinct in their native waters while captive Harpagochromis stocks are not at all abundant. Members of the Harpagochromis group can be found in Lake Victoria, Lake Edward, Lake George, The Victorian Nile, Lake Kyoga and Lake Nawampassa.

Harpagochromis are deep bodied cichlids. They can attain a length of 20cm which is substantially larger than most other haplochrominis from the Victorian basin. A deceptively large mouth is angled upward. The lower jaw extends past the upper. The outer teeth are bicuspid and sometimes unicuspid in larger members of the genus. Between one and five inner rows of unicuspid and/or tricuspid teeth line both jaws.

Harpagochromis sp. "golden duck" is native to Lake Nawampassa, Uganda. It was first introduced to the aquarium hobby by a Laif DeMason of Old World Exotic Fish. Harpagochromis sp. "golden duck" is one of the smaller members of the genus attaining a length of 15cm. Female and immature or subdominant males display a creamy-colored underbelly that joins the mid-lateral horizontal black band and runs the length of the body from the caudal peduncle to the gill plate. Another black horizontal line runs along the upper lateral line. Base coloration of the body is a dull gold color. Dominant male coloration is completely jet black. Varying stages of coloration exist from the subdominant to the



Photo by Greg Steeves

dominant bloom. Two or three bright orange ocelli spot the anal fin. The anal, dorsal and caudal fins range from translucent to jet black, varying with body coloration.

Harpagochromis sp. "golden duck" is deceptively peaceful in a community tank. It can safely be housed with docile cichlids of similar size. It will however, as a piscivore, engulf any fish it can fit into its large mouth. Catfish of the Synodontis genus make suitable tank mates. Harpagochromis sp. "golden duck" is a substrate spawner employing the common haplochromine method of the female circling the male, dropping eggs, and quickly turning to pick them up. In between the females' turns, she nuzzles at the outspread anal fin presumably thinking that the ocelli are her own eggs. The male releases his milt fertilizing the eggs. Spawning occurs on the substrate with no effort going into creating a bower or nest.

Holding females are not harassed by the other



Photo by Greg Steeves

members of my Harpagochromis sp. "golden duck" colony. My tanks hover between 75F and 85F generally, and I stripped the holding female 17 days post spawning. At this time the fry had completely absorbed their yolk sac and were free swimming. I found the fry to be very hardy in the twenty gallon tank they were placed in. This tank is filtered with a Dirt Magnet® sponge filter. My first spawn of Harpagochromis sp. "golden duck" yielded 23 hardy fry.

I feed my Harpagochromis sp. "golden duck" colony basic commercial staple flake as their main source of nutrition. Supplementary feedings of live Gambusia and frozen adult brine shrimp are heartily taken as well. The fry are being raised on a diet of crushed flake and powdered Cyclop-eeze®. Harpagochromis sp. "golden duck" fry grow quickly reaching 2cm in 60 days.

Tank décor consists of native rocks fashioned into caves sitting on a larger grain sized sand substrate. I feel that Harpagochromis sp. "golden duck" males do not stake out much of a territory and the rockwork is for the benefit of the other tank inhabitants (Synodontis flavitaeniatus and Haplochromis sp. "red back scraper). It's been my experience when dealing with piscivores from the region, specifically Pyxichromis orthostoma, a gravel substrate can cause problems with females holding fry. Females will sometimes pick up a small rock or two with her eggs and in the course of tumbling destroys the embryos, hence the choice of a finer substrate. My colony of ten Harpagochromis sp. "golden duck", containing three males and seven females, are housed in a 55 gallon tank. The tank is filtered by a Hagen® 300 power filter and a small "hang on the back" canister filter.

Harpagochromis sp. "Pallisa black slick" is not a fish for your community setup of tetras.

Dominant males are attractive, but for the most part they are not superficially colorful fish. If however, you are interested in trying a species seldom seen in the hobby, or perhaps concerned with species survival and propagating threatened cichlids, you may discover that dedicating a tank to rearing Harpagochromis sp. "Pallisa black slick" most rewarding.

Additional notes:

I was fortunate to obtain my group of Harpagochromis sp. "golden duck" from James Gibbons, a fellow hobbyist who has been working with the species for some time. When I first observed my group of Harpagochromis sp.



Photos by Greg Steeves

"golden duck" reaching adulthood, I was reminded of another species I had seen but never kept, Harpagochromis sp. Pallisa black slick" I believe it probable that Harpagochromis sp. "golden duck" and Harpagochromis sp. "Pallisa black slick" to be one in the same.

A friend in Europe informed me of a discussion which took place among German hobbyist and concerned the topic of whether Harpagochromis sp. "Pallisa black slick" and Harpagochromis sp. "golden duck" were the same fish or not. It was determined that the two were indeed different species as the female "black slick" is a silver fish, and the "golden duck" wore more a golden color. It was also noted that the "golden duck" is found in shallow water close to shore while the "black slick" is an open water species found in deeper strata.

Admittedly, I have not been able to ascertain whether Harpagochromis sp. "Pallisa black slick" and Harpagochromis sp. "golden duck" are distinct species, or if the female difference in coloration noted by German aquarists, is

> intra-species color differentiation. I have not been able to locate reference (with certainty) to the niche they occupy within the Kyoga drainage. Wild caught specimens are stored at Harvard University. Perhaps one day someone can investigate the samplings in detail and perhaps arrive at a definitive answer.

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