

* DELTA TALE *

Nov. 1985
vol. 16 #11
50¢

OFFICIAL PUBLICATION OF

potomac valley aquarium society



FROM THE PRESIDENT

Did this year's Fall Banquet speaker turn you on to the beauty of our own native American fishes? Or perhaps to the beauty of the diverse habitats that fish in these United States occupy? Even the most avid African cichlid enthusiast could not be taken back by the breathtaking slides and ecological knowledge shared by John Brill last month. Examples of biotopes in the U.S. as the hot alkaline spring in Death Valley, Frozen streams in the Central states, the brackish areas of the Northeast, and finally the acid Pine Barrens of New Jersey were explored on the screen. Thanks John for a very interesting evening.

The Auction once again provided an opportunity to purchase something original or long sought after for your aquarium. Be it fish, plant, equipment or even a tadpole, it was available for a reasonable price. Killifish still commanded a high price, and there were plenty of aquariums being recycled into new fishrooms. Things moved smoothly thanks to many helping hands. Still, I'm glad that long afternoon is over. The next one will not be until after the snow melts. Then we will do it all over once again.

November brings a close to our monthly bowl shows. Participation has been outstanding this year, with many people showing a lot of diverse fish. Remember, this month is also the Super Bowl Showdown where the monthly best fish all compete once again for the Grand Prize of 5 pounds of fish food and the title of Best Fish of the Year. The winner will be awarded the prize at the 'Christmas meeting' in December. Also November is election month for PVAS, and although the club has suggested officers for 1986 the list is by no means mandatory. Perhaps we should reconsider the person who is running for President; his beloved fish is almost as nondescript and useless as someone else's Goodies. Bob has been having fun with Betta picta.

There was one item I missed at the Auction, and apparently it was still on the auction tables at the end of the afternoon. I guess nobody really needed an autographed copy of Goodies, Grand and Glorious by Johnnoophorus Manganilis. I thought it had black and white photos until I got to the last page (page 5) and saw a green plant in the background with a fish that looked just like the one on the first page. Perhaps it will reappear in the next auction.

And in December, it has been a grand tradition to spend the evening in fellowship with a pot luck dinner for the family. PVAS provides the turkey and drinks, and with everyone bringing a side dish there is usually plenty of free food for all. Awards are given out for the accomplishments of 1985, and the new officers begin their year of new and exciting ideas for the membership. Plan on being there in December. See you at the next meeting.



FROM THE EDITORZ DESK

The fall auction and banquet are now history. Both events went off well. Everyone seemed pretty pleased with the banquet this year, at least I didn't hear any complaints. We had a nice sit down dinner followed by a very good slide show/talk on native fishes by John Brill. It was a refreshing change from the usual stuff. Hopefully it heightened everyone's awareness and appreciation of our native fishes. They aren't the drab little fishes most people think they are. The auction went pretty well too except for the cold. When Gerry said he found us a room with air conditioning he wasn't kidding. I spent most of the day right under one of the vents. The cold air must have affected my mind somehow- I could have sworn I saw Gerry buy a bag of my goodeids- or maybe the cold air finally woke him up and he's realized what he's been missing.

Elections this month- see the nominating committee report elsewhere in this issue for details.

Also this month there will be an expanded bowl show. This will be your last chance to get bowl show points for the year (no bowl show in Dec.). The 2nd annual Super Bowl show will also be held this month. For those of you not familiar with this it is a showdown of the judges choice winners from all of this years bowl shows. The winner will be the "fish of the year" and will be awarded 5 lbs. of fish food.

For those of you interested in aquatic plants- a new national organization is being formed. It is called the American Aquatic Gardeners Association. For more information contact AAGA at PO box 2327, Cedar Rapids, IA 52406. I will try to bring several membership applications to the Nov. PVAS meeting.

As I'm writing this it is four days past deadline and, as usual, I still haven't received our soon-to-be-ex-presidents page.

It is now seven days past deadline and Gerry's page is finally here. Besides being slow the guy is so cheap that he made his wife drive all of the way from Warrenton to Fairfax with it rather than spend the 22¢ on a stamp.

One final thing before I sign off for this month- please note that every article in this issue is reprinted from some other publication, there is not one original article. The reason for this isn't that I don't like original articles. I'll let you figure it out.



NOVEMBER HAPPENINGS

Program: Care and Maintenance of Salt Water Invertebrates
Rick Bell of Rick's Fish and Pets will discuss these interesting creatures. Slides, speaker, and a wealth of information. What more could you ask for?

Bowl Show: Expanded Bowl Show for extra points toward the year end trophy. Also the Super Bowl Showdown for the Best-of-the-Month Fish. Bring your Best Fish!

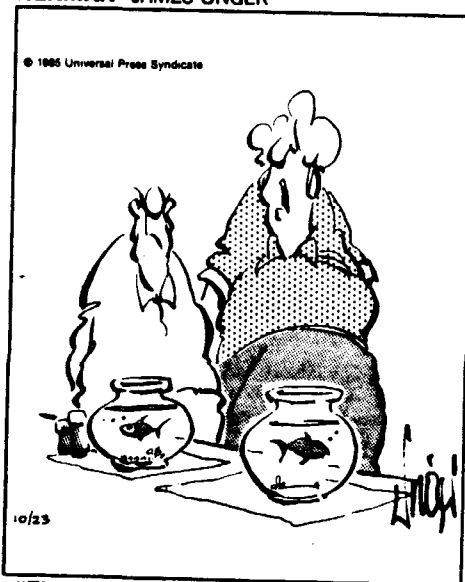
Mini Auction: Last one of the year. No duckweed please.

Elections: A new crew for next year has been nominated. Nominations will be accepted from the floor prior to the election. ✓

Thanksgiving Day: November 28

HERMAN JAMES UNGER

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10/23

"They won't breed like that! Push the bowls closer together."

In Defense of the Chocolate Cichlid
by G. B. Pottern, RAS

There seems to be a prevalent image of the chocolate cichlid as a vicious, destructive, and temperamental fish, to be kept only by hardcore enthusiasts. It is possible that several species are being sold under the name "chocolate". I have seen the names Cichlasoma crassa, C. coryphaenoides, C. temporale, and C. hellabruni applied in various texts (sometimes under the same photograph); all are from the Amazon River basin. I'm not sure which species a chocolate cichlid is, but I doubt whether all the names are valid. Whatever the cause, at least one member of the "chocolate" group does not fully deserve its unpleasant reputation.

Yes, a seven-inch long chocolate cichlid will eat your guppies and neons, and will defend its territory when spawning, but otherwise I have found them to be marvelous community residents among fishes too large to be easily swallowed. It is unfortunately true that chocolates can be rough on each other, so I keep my pair separate except for breeding. The female shares a 25-gallon with Aquidens cerviceps, A. dorsigerus, a golden-eye dwarf cichlid, and various catfish; the male resides in a 40-gallon with Geophagus, Aquidens, spiny eels, and loaches. Both are at least twice the size of the next largest fish, and many times larger than the smallest, but create no problems. Even at feeding time, they do not dominate their tankmates.

Small amounts of gravel are moved only when spawning, and plants are not pulled up or eaten, unless the pair decides to borrow an occupied flowerpot as a spawning site. Even then, sand is excavated until the plant floats out; rarely is a leaf damaged. Feeding is no problem either: large flakes, worms, grasshoppers, pelleted food, and frozen peas are all taken, but chocolates like to eat slowly - they do not gorge like many cichlids. So why has the "difficult species" stigma persisted?

Breeding may be the answer. They are not easy to sex (my female is more red, and the male has blacker tips on the pelvic fins - but these may not be reliable indicators) and are very choosy about potential mates. Introduce strangers only when you have time to watch them closely; separate them if you plan to be away. A plexiglas divider with a removable door is useful; the fish at least get used to the sight and smell of another chocolate cichlid nearby. Even a "happily tolerant" pair may declare war one day. They breed like other Cichlasoma species, but the eggs are placed on a vertical surface, like angelfish do. Parents take turns guarding and fanning, but they are not very attentive, so keep Plecostomus or other potential egg predators out. Young pairs are notoriously poor parents, but my pair has improved with age; I've heard that some individuals never improve and the fry must be artificially raised. Spawns are rather small for such a large fish (200 - 300 eggs) and larval mortality is high. I've gotten, at most, 100 to the free-swimming stage, even when nearly all the eggs hatched. Fry can then take newly hatched Artemia or plankton; mine showed no interest in dry foods. Growth is very uneven, so the largest ones must be removed periodically, and clean water is critical.

I'll agree with William Innes (Exotic Aquarium Fishes) that the color of this fish is impossible to describe, but happy ones are truly magnificent. The common name was undoubtedly bestowed on an unhappy (probably dead) specimen; mine would be better described as burgundy rather than chocolate. They are

generally lazy beasts, hanging in mid-water, nose up like a pencil fish; when moving, they glide like an angelfish. I recommend them highly to lovers of large fish, but I'd suggest keeping them with smaller species, or else with similarly laid-back large fish (C. severum, Goepagus, Uaru, knifefish, Aruana). Also, one per tank is probably best, until the urge to breed them overwhelms you.

(reprinted from Carolina Aquarist, Raleigh Aquarium Society)

NOMINATING COMMITTEE REPORT

Below is the slate of officers proposed by the nominating committee. Elections for the 1986 PVAS officers will take place at the November meeting. Additional nominations will be accepted from the floor at that time. Anyone wishing to run for any office should get someone to nominate them from the floor AND be present to accept the nomination. If you don't feel that you know anyone well enough to ask them to nominate you then contact me or any other current officer. We will be glad to help you.

John Mangan

Proposed Candidates for 1986

President- Bob Roser

Vice President- Bob Pallansch

Treasurer- Gerry Hoffman

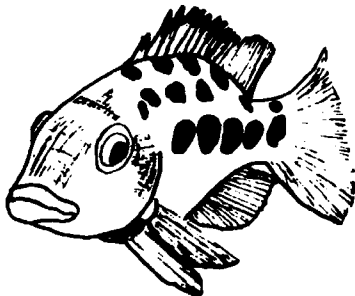
Recording Sec.- Pat Gore

Corresponding Sec.- Mark Westling

Board of Governors- 2 positions open

John Jessup

Ray Hughes



THE MIRROR

Pat Mahoney

REPRINTS

PACKING FISH FOR AN AUCTION, John Mangan, PISCES PRESS,
Nassau County (NY) Aquarium Society, SEP 1985.

APISTOGRAMMA CACATUOIDES, Joe Paull, WET PET GAZETTE,
White Rose Aquarium Society, York, PA, SEP 1985.

THE BLACK GHOST, John Mangan, THE SPLASH, Milwaukee
Aquarium Society, Milwaukee, WI, OCT 1985.

REVIEWS

THE BLACK GHOST, John Mangan, THE TROPICAL BREEZE,
San Diego Tropical Fish Society, SEP 1985.

PTEROPHYLLUM SCALARE, Bob Roser, TROPIC TANK TALK,
Greater Detroit Aquarium Society, SEP 1985.

DELTA TALE - PVAS, John Mangan, Editor: Mike Sheridan
reviews John's article on preparing fish for show and
auction as well as commenting favorably on our Spring
Show. Mike was a judge in this year's competition.
THE REPORTER, North Jersey Aquarium Society, SEP 1985.

The North Jersey Aquarium Society will be holding their
Fall Show and Auction on November 9 & 10 at the Meadowlands
Environmental Center, Dekorte Park Plaza, Lynhurst, NJ.
Contact PVAS member Pat Mahoney, ph. 534-0006, for details.



AN ARGUMENT FOR LIVE AQUARIUM PLANTS: SOME SUGGESTIONS

By: BoB Fenner S.D.T.F.S.

Almost every fresh-water life system can benefit from the use of vascular plants. Live plants do many things; in a few words, they make an aquarium more self-regulating (homeostatic). A biological set-up is more able to mediate environmental changes.

Functionally, plants use up a lot of inorganic nitrogenous salts. This, along with reducing the amount of available light, reduces algae growth. They play other roles in bio-geo-chemical (nutrient) cycling by lessening the concentration of carbon dioxide, and less importantly, producing oxygen by photosynthesis (during the hours of light; they do the opposite at night).

Plants provide food matter directly and indirectly providing a habitat for micro-organisms. They also make for a physical break-up, spawning medium and security blanket for the macro-biota.

Plants serve also as a bio-indicator, a living test as to the suitability of the environment. Many plants have a more narrow temperature-chemical range than many fishes. In the old days it used to be said that if your Wisteria does well, then your rummy-nosed tetras (Hemigrammus) will.

Besides all these functional aspects, live plants have high decorative value- which is reason enough for using them in your tanks.

Many people have problems keeping plants alive. This is generally due to a lack of understanding on the keeper's part as to some basic living requirements. Here are some hints:

Maybe you've seen the soybean commercial on T.V. where the soybean is breathing direct atmospheric nitrogen; legumes can do it, so can some dino-flagellates and blue-green algae, but vascular plants can not. They require something in the way of nitrifying bacteria to "fix" their nitrogen. That is, to change things like fish wastes into compounds like nitrates that are usable by the plants. This establishing of a nitrogen cycle in a "new" (sterile) body of fresh water takes about two or three weeks with "wastes" or live fishes present. So wait a good two or three weeks after fishes have been placed in the tank before adding much in the way of live plants. Also, most plants are rather sensitive to certain chemicals; most notably the "heavy" metal medications. The plants should be removed, or much better, the medication applied in a separate tank. Water from many localities contains a high concentration of "free" metal. If the water is set aside for two or three days, much of the bad effect will "fall-out" or you add a carbon filter of some sort, such as Tetramelle's Aquasafe activated carbon.

The strength, quality and duration of light is sometimes of importance. Check for the requirements of the plants in questions. Plants differ in their light needs.

With some rooted plants, the size, type and depth of gravel is a concern, especially when a subsand filter is in use. With most, it's a good idea to plant in separate blind containers, placing a chemically inert barrier between the filter and plants, or at least to make the gravel especially deep.

With all this said, what are some plants which will do all those things that a good live plant can do? Many of the bunch type plants are especially good. Anacharis (Elodea) and Cabomba are two of the best. They have a broad temperature range and chemical tolerance, are fast growing, inexpensive and readily available. Others, like Myriophyllum and Ceratophyllum, which are sold as parrot feather, foxtail and hornwort, appreciate a little cooler water and don't seem to be as tasty to fishes.

live plants, cont.

This meant as no comprehensive survey text of plants suitable for aquaria. There are well over two thousand species and many horticultural varieties, though few store stock more than a couple.

In conclusion, it may be argued that live plants are not a necessity; that their introduction involves a risk of pollution and the addition of disease or unwanted snails; that the plant matter required in fishes' diets may be gotten out of prepared foods; that plastic plants are just as pretty, etc., but, if seriously compared, the advantages of live plants far outweigh their shortcomings. Try them!

Reprinted from The Tropical Breeze, San Diego Tropical Fish Society

Q & A

Anyone having questions on fishes or any related topics may send them to Delta Tale c/o John Mangan, 9770 Oleander Ave. Vienna, VA 22180.

TRADING POST

All ads for the trading post should be sent to Delta Tale c/o John Mangan, 9770 Oleander Ave. Vienna, VA 22180, by the 20th of the month prior to publication.

Want: *Allotoca dugesi*, *Zoogoneticus quitzeoensis*, *Allodontichthys* sp. old aquarium books and magazines.

Have: Goodeids, several species; Egyptian mouthbrooders; John Mangan, address above.

Want: *Apistogramma* spp.

Have: fry of *Aphyosemion australe* & *Rivulus cylindracus*. Andy Hill, 281-6484.



PUT A CAT IN YOUR TANK!!!
by Scott Kupchick, ALAS

Of all the fish an aquarist has to choose from, I cannot imagine anyone setting up a tank without including at least one type of catfish.

There are many types of catfish within a number of families so the aquarist has plenty to choose from. Catfish show a wide variance of color patterns from albino to spotted, striped, and anything in between. Their overall look ranges from that of a normal looking catfish to something from another planet. Their range of sizes makes them at home in any tank from a five gallon tank to a large show tank.

As they go about their business of looking for food on the tank floor, they provide an interesting contrast to their upper level counterparts.

One reason that most beginning aquarists buy a catfish is that they often are given the impression that catfish are "underwater vacuum cleaners" that will keep their tank free of debris. Although they are useful scavengers and algae eaters, they should not be left to search for food without giving them meals of their own.

Probably the most popular species of catfish, owing to their availability, price, and peaceful temperament are the Corydoras catfish. This type of catfish is represented by over 100 recorded species, a portion of which are commonly found in the aquarium trade. These are fairly small fish, between 1 1/2 to 5 inches in length. They are amusing, active creatures that go about their business without bothering their tankmates. They are not too fussy about water conditions so long as it is not too acid and does not contain a lot of salt. For foods, they will accept most all types of dry and frozen food and are very fond of tubifex and other worms.

Another family containing hundreds of diverse and often wrongly classified species is the Loricariidae family. This family consists of fish that are mainly algae eaters - the two most commonly seen are the Plecostomus and Octocinclus species, one of two main types sold as "algae eaters". These above mentioned fish, along with such oddballs as the twig catfish and the bristle-nosed catfish, are mainly nocturnal fish ranging in size from 2 inches (Dwarf Octocinclus) to two feet (various Plecostomus). They are all equipped with sucker-like mouths, rows of rasp-like teeth for scraping off algae, and bony armor-like plates on their bodies. As far as water conditions go, they will do well in water that is slightly acid to slightly alkaline and soft to medium hard. Although primarily algae eaters, they will take scraps of dry and fleshy foods.

A group of vary popular and attractive fish are the Synadontis catfish species. These are small to medium size fish with large eyes and long barbels that remind one of a typical catfish. The most common and probably the most popular is the upside-down catfish. As it's name implies, it spends most of it's time swimming upside-down, which makes it a particularly interesting specimen. Most cats in this group are silver to brown in color with a spotted or striped pattern. These fish do best in dimly lit tanks with sheltered areas, as they are also nocturnal. The water chemistry is not too critical, but extremes of pH and hardness should be avoided. They are good scavengers

and will take most foods whether they are dry, frozen, or live. This diet unfortunately includes smaller fish, but they are basically a peaceful group of fish.

One other group of very attractive catfish are found in the family Pimelodidae. A commonly found catfish of this family - the spotted Pimelodella - is often sold as an "Angelicus Catfish". This fish, like others in the family, is a slender graceful-looking fish with long trailing barbels. These fish are between 5 and 18 inches in length, depending upon the species. The largest catfish in this family that is sometimes available in fish stores is the shovelnosed catfish. All fish in this family are relatively peaceful, but have fairly large mouths and will eat smaller fish at times. Most dry, frozen, or larger live foods such as earthworms are eagerly accepted.

There are dozens of other types of catfish that can be found that are also worth looking into. So, instead of adding to your school of barbs or getting another pair of swordtails, consider putting a cat in your tank!

(reprinted from Fish Tales, Aqua Land Aquatic Society)

SINK OR SWIM

By: Debbie Tollin, D.A.S.

As all aquarists have noticed, the fish is marvellously adapted to life in a water medium. This environment has required fish to adapt in specialized ways. For example, since fish tissues and skeletons contain elements heavier than water, these creatures have had to either modify their behavior or evolve biological mechanisms to avoid sinking. Primitive fish, such as sharks, solve the problem by swimming continuously, even while sleeping.

The bony fishes, or teleosts, which we keep in aquaria, have evolved a specialized air-filled organ called a swim bladder. By adjusting the volume of air in its swim bladder, a fish can achieve an equilibrium buoyancy at whatever depth it chooses. This is why an aquarist will notice certain fish rising to the surface to gulp air or letting out bubbles at lower depths in the tank (watch your Gouramis).

More advanced fishes have evolved specialized glands which transfer air from the swim bladder to the bloodstream and back as the need arises. This eliminates the need for frequent trips to the surface. Most bottom-dwelling fish use this mechanism.

Reprinted from Fish Views & News, Desert Aquarist Society

FISH SENSE
by Kathleen Sykalski, MAS

Did you ever wonder how the world would look through your fish's eyes? What would you hear as you glided effortlessly through the aquarium? How would the water feel to your scaly skin? And just how tasty is that flake food? Well, fish have senses too, some much like our own and some very different.

The cutaneous senses are as important to your fish as they are to you. These include temperature, pain, touch, and taste. So far, temperature perception has been well-investigated only in the bony fishes. Both marine and freshwater fish can detect the change of 0.03 degree C., provided the change occurs quickly. Fish can also tell if the temperature is rising or falling. The front half of the fish is most sensitive to temperature sensations, but sharks and rays react along their entire bodies. Our human sense of temperature change is more general, and we detect rapid changes of 0.01 degree C. only if our whole body is affected.

Humans have an acute pain sense, with several types of pain receptors in the skin. Fish, however, lack these complex pain receptors. Scientists have concluded that fish do not feel pain as strongly as we do.

Fish are very sensitive to touch, like us, especially Siluridae catfish, moray eels, sharks, and fish with barbels. Yet a fish's touch sense is very general, more like a vague feeling of pressure. It is not as precise as ours. Unlike us, fish dislike touching things.

Fish have taste buds in their mouths, lips, throats, and on their snouts. Some such as catfish and loaches, which feed in murky waters where they cannot see food, have extra taste buds on the body. You and I can taste salty, sweet, bitter, and sour sensations. For humans, all taste is combinations of these four sensations with smell. Fish sense these too, but have a fifth sense - protein - which they prefer. Humans prefer sweet substances.

Vision is another important sense we share with most fish. Research shows that most bony fish and nearly all open water fishes are farsighted. Images are poorly focused. The best vision occurs in ground fish like flounder and marine reef fishes. Most shallow water fishes have color vision like our own, and a few species can see colors in the ultraviolet range invisible to us. Other fishes such as lampreys see a world of blank and white. Sight-feeding fish like the black bass can discriminate shapes but, unlike us, do best if the shapes are moving rather than stationary. Sight-feeding fish do better than us in discerning light-dark visual contrast and movement.

We humans have binocular vision and so can judge distance and depth very well. Some fish, like pike, have sighting grooves in front of their eyes. Looking down, these lines lead to an area of 3-dimensional vision like our own. Most fish lack good depth perception, however, and rely on other senses to tell an object's distance. Unlike us, many fish can move their eyes independently and have a wider visual field. Hagfish even have light sensitive areas on their bellies.

Can fish smell? Yes. Fish even have nostrils and a well-developed smell center in their brains. A fish's sense of smell is important both in finding food and orientation. Sharks cannot find food at all if their nostrils are plugged. Sunfish moved from their home range in a stream can find it again by smell. Minnows give off a scent alarm substance when frightened or injured. If other minnows smell this, they disperse. Catfish use smell to differentiate individuals in their social group.

The sense of hearing varies by the species of fish. Humans hear sounds in a range from 20 to 30,000 cycles per second (cps). The Cypriniformes have the finest hearing - from 16 to 13,000 cps, whereas the sharks hear sound from only 400 to 600 cps. In humans, sounds resonate on the eardrum, but in fish the gas bladder acts as a resonator. Fish lack true directional hearing because water distorts sound more than air. Sound does not play as important a part in a fish's perceptual world as it does in ours, although some fish use sounds for warning or communication.

A special sense your fish have but you lack is the lateral line system. This is a line of sensory receptors located in a horizontal line along the fish's body. With their lateral lines, fish not only sense position changes and so maintain balance, but can sense immediate vicinity. For example, cat sharks can sense potential prey by detecting changes in electrical activity in the prey's muscles. The elephant fish and Gymnotid eels sense electrical fields. Only some fish among all animals have organs that generate and detect electrical discharge. It is the lateral line system which gives many fish a sense we humans totally lack - "distant touch".

So how would it feel to be a fish? You would glide along feeling the coolness or warmth of the water and being careful not to let anything touch you. Those flakes of food would taste especially good if their main ingredient is fishmeal, and you could smell them drifting down through the aquarium. As one of your tankmates is netted, you would see his thrashings much like a flat television picture. You would smell his fear, and you would hear the net descending, although it would be difficult for you to judge the direction of the sound. After things settle down, you would again glide along. As the house quieted and the glaring fluorescent light is turned off, you would still be aware, by your sense of distant touch, that all around you are other living creatures.

Sources:

- Arthur C. Guyton, M.D. Structure and Function of the Nervous System, W.B. Saunders Company, Philadelphia, 1976.
Karl F. Lagler, et al. Ichthyology (second edition), John Wiley and Sons, New York, 1977

(reprinted from Splash, Milwaukee Aquarium Society)

SPAWNING THE MADAGASCAR RAINBOW (BEDOTIA GEAYI):
THE SACRIFICIAL TANK TECHNIQUE
by Jim Peterson, SWMAS

Bedotia geayi is a particular lovely rainbow fish with habits that make it an ideal community tank dweller. First described by J. Pellegrin in 1907, the initial fish were found living in a small stream in a heavily forested area of Madagascar. Pellegrin was struck by the similarities in habit and environment between Bedotia geayi and certain killifish and, indeed, hobbyists generally spawn them in the manner of a mop-spawning killifish. Apparently the Madagascar rainbow fish entered the hobby about 1960, but it is only rarely seen today.

I obtain my Madagascars from Gordon Moats as 60 day old BAP fry. Gordon has raised several hundred of these fish and deserves a lot of credit for reintroducing this very desirable aquarium fish back into the hobby in this area. Except for the period when they were spawning, my Madagascars were always kept in community tanks. Initially they were kept in a ten gallon tank with guppies, platies, and other small fish. After they reached a length of about two inches, I moved them to a 29 gallon tank which they shared with two pair of adult angelfish and a few other medium sized fish. Bedotia geayi spend most of their time cruising the upper and mid-range of the tank, often hovering quite still for periods of time. They are very peaceful fish; I never noticed them acting aggressively towards any other types of fish, even those much smaller. Occasionally Bedotia males will chase one another, but this seems pretty harmless without any real fighting.

These seem to be pretty hearty fish that present few problems to the aquarist. I keep ours at 76 degrees F. with no adjustments made to the water other than the addition of about one-half teaspoon of salt per gallon of water. The Madagascar rainbow is a freshwater fish that tolerates salt quite well. Salt is not, however, essential as it is with some other rainbows. My fish were fed primarily on a diet of flake food, freeze-dried bloodworms, and frozen brine. They were obviously very fond of the tubifex that they also received on a rather irregular schedule.

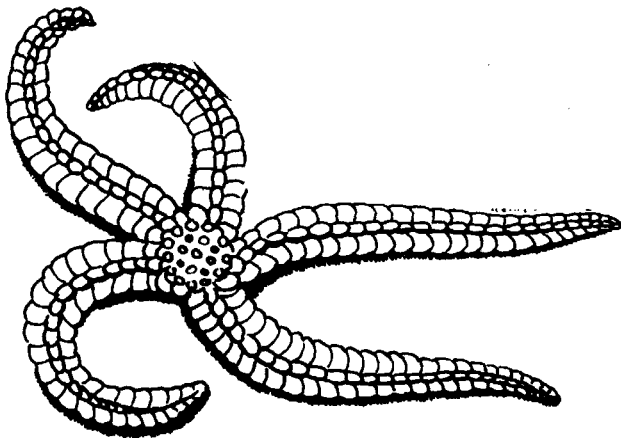
My Bedotia geayi were spawned when they were about four inches in length, but they could have spawned at half that size. As the females filled out very well in the community tank, I did not separate the sexes prior to spawning. These fish are very easy to sex as not only do the females have more rounded bodies when they fill with eggs, but the tips of the caudal are white in female fish and red in males. Initially I placed a pair of the fish in a new ten gallon tank that was bare except for a sponge filter, and airstone, and two floating mops constructed of blank synthetic yarn. The mops were conventional killifish mops that had been boiled to remove any excess dye. By the next day, some large yellowish eggs were visible in the mops. I then decided to add another male and two more females to the spawning tank, along with another mop, to try to increase the number of eggs. This seemed to work well and after a couple more days the mops were filling very nicely with eggs.

At this point, the spawning tank was knocked off its stand and against a wall by my two sons who had been rough-housing near it. This cracked the tank and released a cascade of water that closely resembled the torrent flowing over Niagara Falls. I netted the Madagascars and returned them to their community tank home, and threw the mops into a bucket of the water I drained from the cracked tank. After cleaning up the mess and engaging in various threatening behaviors to my sons, I set up another new ten gallon tank. Into this I placed tap water treated to artificially "age" it and remove the chlorine, the bucket of water removed from the cracked tank, ten drops of a 5% solution of methylene blue, a sponge filter, an airstone, and the three mops.

Despite all the jostling around that did dislodge quite a few eggs, about forty fry hatched out within eight to ten days. Upon hatching, Bedotia fry are free swimming but most seemed too small to eat newly hatched baby brine. I left the fry in the tank and fed Liquifry and Tetamin "E" baby fish food for four days. By the third day I began adding microworms along with these foods. After five days I introduced baby brine while still continuing the microworms for a few more days. Within a few days, all the fry were eating baby brine, and this remained their main food, along with crushed flake food, until they were over a month old. Throughout this period, I siphoned about ten percent of the water from the bottom of the tank every two or three days. I found that the fry grew quite rapidly and by ninety days were about one and a half inches long.

I believe that hatching the eggs in the mops in a well aerated tank and raising the fry in the tank rather than in the small containers commonly used for killies may prevent heavy losses of fry. Other than a couple that died within a few hours of hatching, I didn't lose any fry. I am less certain that the ritual destruction of a new tank is an essential part of the reproductive ritual of Bedotia geayi. Those, however, who believe that success in breeding fish is only achieved after appropriate sacrifices have been made to the gods may wish to replicate the event. If necessary, my sons are available as consultants.

(reprinted from Swam, Southwestern Michigan Aquarium Society)



BREEDER'S AWARD PROGRAM

Garland Neese	1,115	++++
Gerry Hoffman	895	++++
Pat and Maggi Mahoney	785	++++
Darrell Holman	640	++++
John Jessup	585	+++++
 Ruth Brewer	 305	 +++
 Roser Family	 220	 ++
Wagner Family	165	++
 Frank Angilletta	 140	 +
Alex Cummins	125	+
Nathan Manwaring	100	+
Amy Stirman	50	+
 Pat Gore	 10	
John Mangan	10	
Ray Krause	10	

RECENT SPAWNINGS

Roser Family	Aphyosemion scheeli
Garland Neese	Poecilia chica

CHECKERS

Alex Cummins	... 656-6355	Ray Hughes	... 424-3531
Pat Gore	... 522-3883	Jerry Stirman	... 941-6729
Frank Angilletta	... 670-8980	Kenny Warren	... 378-8838

KEY

Grand Master Breeder	+++++
Master Breeder	++++
Advanced Breeder	+++
Intermediate Breeder	++
Breeder	+

NOTICE FROM THE BAP CHAIRMAN: The deadline for submitting Spawning Reports (and articles) for 1985 is 1 December. Our Christmas Party is scheduled for 9 December 1985 and I must have time to make the awards that will be presented at our Christmas Party. If you have validated reports that you have meant to submit, please get them in. If you have any questions concerning your spawning reports, please call Pat Mahoney at 534-0006.

BOWL SHOW REPORT FOR

October

CICHLIDS

New World Mouthbrooders

1st
2nd Entries
3rd 0

Pseudotropens

1st
2nd E N T R I E S
3rd 0

Open

1st J. Long-Buffalo head
2nd J. Bennet-Marble Angel
3rd J. Bennet-Black Angel

EGGLAYERS/LIVEBEARERS

Goldfish, Koi

1st P. Thrift-Oranda
2nd
3rd

Characins

1st G. Hoffman-Splash Tetra
2nd J. Long-Congo tetra
3rd G. Hoffman-Glass Bloodfin

Open

1st N. Manwaring-J. Floridae
2nd J. Lamberth-Guppy
3rd G. Hoffman-I. wernerii

MONTH QUARTER ANNUAL

D. Sun	0	0	103
J. Lamberth	1	1	31
J. Kooken	5	15	28
J. Long	6	6	25
A. Stirman	0	0	16
J. Bennet	5	5	9

MONTH QUARTER ANNUAL

J. Metzger	0	0	102
B. Pallansch	0	0	61
J. Lamberth	6	6	80
G. Hoffman	10	10	35
N. Manwaring	0	0	16
J. Mangan	0	0	6
B. Roser	0	0	12
D. Sun	0	0	9
J. Kooken	0	0	7
A. Hill	0	0	6
D. Mann	0	0	5
J. Long	0	0	4
A. Stirman	0	0	3

Next Month **E X P A N D E D** S H O W

All categories plus the best of show

contest

POTOMAC VALLEY AQUARIUM SOCIETY, inc



POST OFFICE BOX 6219 SHIRLINGTON STATION ARLINGTON, VIRGINIA 22206

APPLICATION FOR MEMBERSHIP

DATE _____ 19__

NAME _____

STREET _____

CITY _____ STATE _____ ZIP _____

TELEPHONE CONTACTS H _____ B _____

Number of tanks _____ Time in hobby _____

Fish you have spawned _____

What can this club do for you _____

What do you want to do for the club _____

Which sub-groups of fish interest you _____

How long do you plan to be in this area? _____

Occupation _____

Membership dues for the Potomac Valley Aquarium Society are:

Family	\$12.00	Corresponding	\$7.00
Individual	\$10.00	Junior (under 18)	\$5.00

Please send application and check for dues to address above.

Potomac Valley Aquarium Society
P.O. Box 6219 Shirlington Station
Arlington, Virginia 22206

Potomac Valley Aquarium Society Meets on the Following Dates in 1985

Jan. 14	May 13	Sept. 9
Feb. 11	June 10	Oct. 14
March 11	July 8	Nov. 11
April 8	Aug. 12	Dec. 9

Meetings are held at the John G. Wood Facility, Rt. 237 (Old Lee Hwy.)
Fairfax City. Everyone is welcome.

*Meetings start at 8:00 p.m.
Doors open at 7:30*