



# DELTA TALE

Official Publication of the  
**POTOMAC VALLEY AQUARIUM SOCIETY**

Volume 33, Number 2

**In this Issue:**

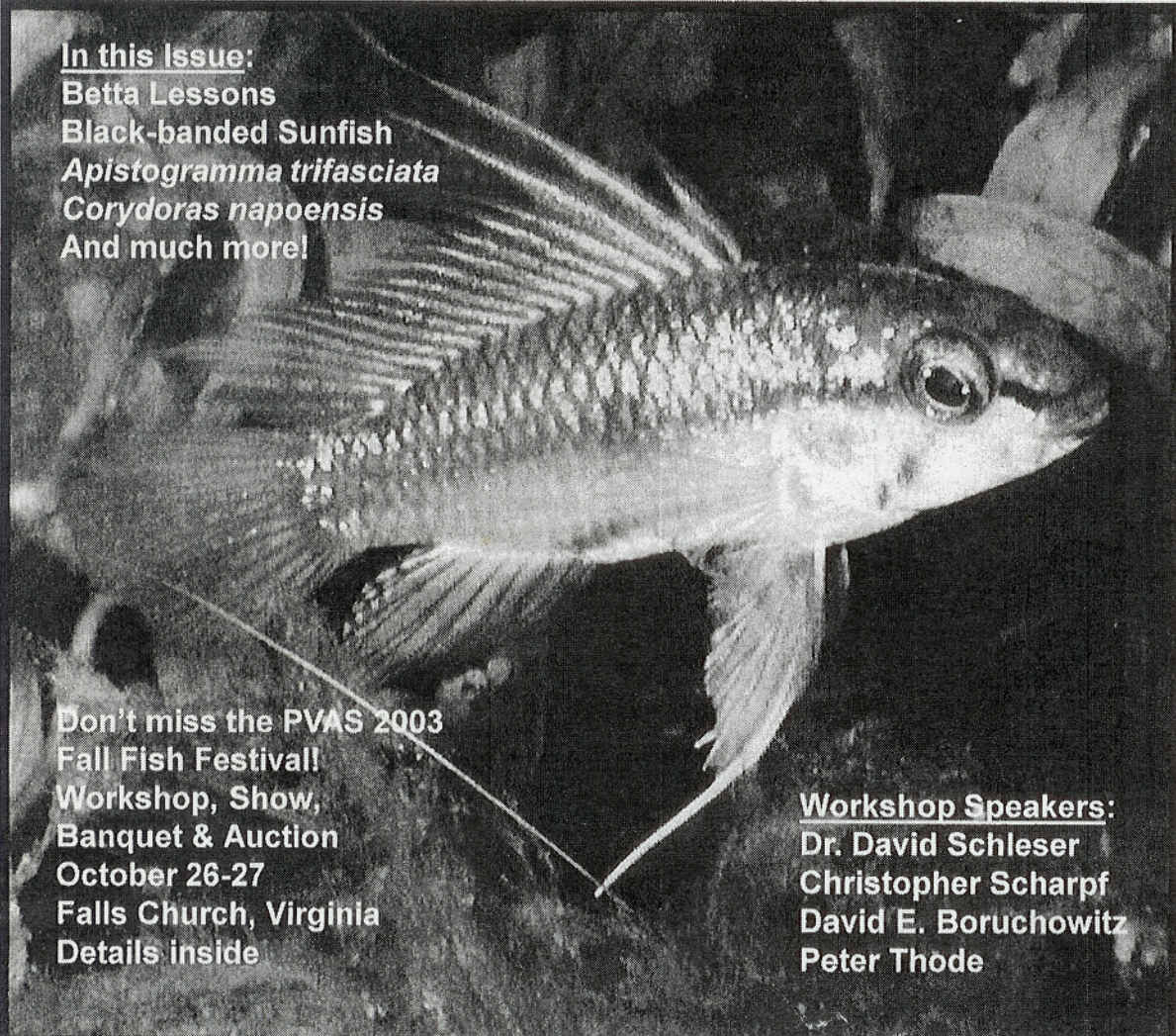
**Betta Lessons**

**Black-banded Sunfish**

***Apistogramma trifasciata***

***Corydoras napoensis***

**And much more!**



**Don't miss the PVAS 2003  
Fall Fish Festival!  
Workshop, Show,  
Banquet & Auction  
October 26-27  
Falls Church, Virginia  
Details inside**

**Workshop Speakers:**

**Dr. David Schleser**

**Christopher Scharpf**

**David E. Boruchowitz**

**Peter Thode**





# DELTA TALE

Volume 33, Number 2

Delta Tale is published quarterly for the benefit of the membership of the POTOMAC VALLEY AQUARIUM SOCIETY, INC., a non-profit educational and social organization. The society was founded in 1960 for the purposes of furthering the aquarium hobby through the dissemination of information and advice, and the promotion of good fellowship among the membership by organized activities and competitions.

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Cover Photo:  
*Apistogramma trifasciata*  
by PVAS Member Don Kinyon

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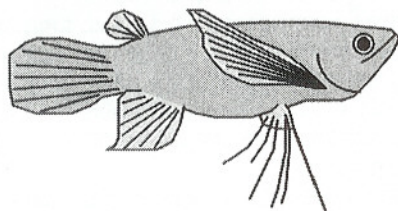
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Line drawing by PVAS member Gene Moy

## President's Message

Wow... I've never been president of anything... and never really had the aspiration to be president of PVAS. As you probably already know, Doug Patac decided to move closer to his family and resigned his PVAS board position. Thank you, Doug, for all your hard work for the club, this year as president and in the past as an active and concerned member!

At first, I was stunned and chagrined. I grabbed my copy of the bylaws to see what happens next. Yup, VP takes over as president. Who... me???

Then my mind began whirling with all our club needs to do in the next few months to prepare for the October 26-27 Fish Festival, and address the needs of our members into the coming year.

My first few board meetings proved extremely productive and rewarding. We have a terrific board, and several members stepped forward to fill much-needed positions.

- Andrew Blumhagen has stepped forward as vice president.
- Alysoun McLaughlin volunteered to take his spot as a director.
- Michael Brem volunteered to take Larry Grenier's spot as a director.
- Terri Vance, our recording secretary, also volunteered to take over the Bowl Show activities.
- Francine Bethea had previously handled both membership and Bowl Show. She will now take over production of the Delta Tale.

I also surveyed members via the PVAS discussion list, to ask what they wanted from the club, and to ask them to take on some important tasks. Thank you, thank you, thank you... to Rodney Conway, who is now handling membership and serving as Exchange Editor for us, and to Gene Moy who will manage our web site. These are big jobs that are critical to our success in communication to and serving all of our members. I am thrilled to have you both on board!

We still need volunteers to help with our upcoming workshop and auction, to serve as keeper of the coffee pot, provide the materials for raffles at meetings and auctions and take care of providing snacks and drinks for meetings. Please consider helping out. It's an outstand-



ing way to get to know more of our members, and take a role in helping the club become more interesting and valuable to you.

Emily Novotny has been serving as the chair of our nominating committee for next year's officers. The election will be taken at the membership meeting in November. If you are interested in serving on the board, you may still step forward then. All club members are also welcome to attend board meetings, which are usually held immediately prior to the monthly meetings. This is a great way to begin working with the board with an eye to taking on a position next year.

Now, I'm feeling more confident. But, most of all I am very, very proud to call myself president of the Potomac Valley Aquarium Society. We have a great club with an enormous amount of talented leadership. I hope you will count me among them.

Nancy Johnson



## From the Editors' Tank

We are feeling a combination of pride, regret, relief and amazement as we put together our last edition of the Delta Tale.

We're proud, first, of the work of so many members of PVAS in providing the content that makes this one of the best aquarium society newsletters in the country. Don Kinyon and Francine Bethea, a lot of the credit belongs to you. Your articles on dwarf cichlids and *Corydoras* catfish have been the backbone of the Delta Tale throughout our tenure as co-editors, and we look forward to reading many more articles from both of you. Shane Linder's collecting diaries have given us all an appetite for collecting in South America and Bob Bock's articles have led many of us to join him on native fish collecting trips right here in our own backyard. John Mangan has continued to edit the Breeders' Award Program Corner and to contribute his own breeding reports and articles. Other contributing writers during the past three years have included Gene Moy, Dave Snell, Leslie Keefer and Bill Pabst. Thanks to you, every single edition of the Delta Tale we have published has included several original articles and breeders' reports from club members. How many aquarium societies can say that?

Julio Melgar, Nancy Johnson and Rodney Conway have each served as Exchange Editor, poring through other aquarium societies' newsletters to share with us reprints of their work. We have tried to identify articles that featured fish that are not commonly kept and bred by club members and to publish particularly interesting or entertaining articles on club members' favorite fish.

We are also proud of some of the changes that we've introduced to the Delta Tale. When we took over, the Delta Tale was still being cut and pasted together the Delta Tale the old-fashioned way - with scissors and tape. We computerized it, first in MS Word and then in PageMaker, to standardize the fonts and text sizes and make it easier to submit articles over the Internet. We started using club members' digital photographs on the cover and along with the articles.

Our favorite new feature is the "Nostalgia" section, which reprints articles that appeared in previous editions of the Delta Tale. This gave us an opportunity to share some of the "oldies but goodies" from the Delta Tale, from Master Breeder Gerry Hoffman's breeder's reports to an account from Gene Aldridge's on collecting in Peru.

It's been a good run. We fulfilled a lot of our goals for the Delta Tale, but unfortunately have to leave some of them unfulfilled. When we started as co-editors, we had some lofty ideas about someday printing a full-color, 36-page publication, including ads from local fish stores, every two months, both in a print version and on the Internet. That's a lot harder than it sounds. It will take a lot of work by a lot of club members to get there, and we look forward to working with the new editor to keep making improvements in the Delta Tale.

John Mangan, how on earth did you manage to edit the Delta Tale for so long? We've been serving as co-editors for three years, one quarter the time that you did. Now that we've experienced, firsthand, the amount of work that goes into putting together an edition of the Delta Tale, we're amazed that it has been in publication for over three decades and at the work that John and the rest of our predecessors put into it.

So why quit? That's where we get to the relief part. It is a lot of work to put together the Delta Tale and we have put many, many full weekends into publishing an edition in time for that Monday's monthly meeting. Now that Andrew is serving as Vice President of PVAS and Alysoun is serving on the board and as president of one



of our sister clubs, GWAPA, we have new responsibilities to take on and it's time for someone else to publish the Delta Tale. We're excited that Francine Bethea, contributor of dozens of articles and photographs to the Delta Tale, has volunteered to take over.

It's only fitting that our last edition would have both an *Apistogramma* and a *Corydoras* breeder's report by Don. As always, you'll also see Gene's line drawings of popular aquarium fish, which have added interest and been an editor's saviour for those hard-to-fill blank spaces that inevitably appear between articles or other items in the publication. Leslie Keefer, in her second Delta Tale article, offers some insight into keeping and breeding *Betta splendens*. We're also pleased that Bob Bock is continuing his series of articles on native species and offers one on Black-banded sunfish for this issue. Finally, as Rodney Conway's first offering as Exchange Editor, we have a timely article on keeping and breeding Snakeheads.

So what next? We joined the club about four years ago and have watched it grow since then. We'll still be working on that goal with our fellow officers and committee chairs. We also will have more time to write articles for the Delta Tale. Andrew has one in the works on Clownfish and Alysoun has several ideas she's been wanting to get onto paper. So you'll see us on the other side of the Table of Contents from now on. Until then, thank you very much for your support (and patience) and we hope you've enjoyed our rendition of the Delta Tale.

Andrew & Alysoun



Line drawing by PVAS member Gene Moy

## What's Happening

### PVAS Calendar

October 7	Monthly Meeting
October 26-27	Fall Workshop/Show/Auction
November 18	Monthly Meeting
December 8	Holiday Party/Awards Presentation

### Other Local Events

September 28	GWAPA Meeting, Springfield, VA
October 6	CMAS Meeting, Baltimore, MD
October 19	WAMAS Meeting
October 20	CAKC Meeting, Burtonsville, MD
November 3	CMAS Meeting, Baltimore, MD
December 1	CMAS Annual Christmas Party

CAKC-Chesapeake Area Killifish Club,  
[www.chesapeakekillifish.com](http://www.chesapeakekillifish.com)  
 CCA-Capital Cichlid Association,  
[www.capitalcichlids.com](http://www.capitalcichlids.com)  
 CMAS-Chesapeake Marine Aquarium Society,  
[www.cmas-md.org](http://www.cmas-md.org)  
 GWAPA-Greater Washington Aquatic Plants  
 Association, [www.gwapa.org](http://www.gwapa.org)  
 NANFA-North American Native Fishes Association,  
[www.nanfa.org](http://www.nanfa.org)  
 WAMAS-Washington Area Marine Aquarium Society,  
[www.wamas.org](http://www.wamas.org)

If you know of another local aquarium club and would like to include its information, please e-mail the editors at [delta@pvas.com](mailto:delta@pvas.com).

## Upcoming Bowl Show Categories

Month	Class I	Class II	Class III
October	Central American Cichlids	Loaches	Old World Killifish
November	Apistogrammas	Minnows	New World Killifish
December	Awards Ceremony		



## Betta Lessons

Leslie Keefer

Occasionally as we progress in a hobby, we lose touch with the magical aspects that drew us to that activity in the first place. Technical information takes precedence. I decided a few years ago that breeding *Betta splendens* would be the best option for me given my small quarters. Last fall, I ordered some very beautiful well-bred fish from a breeder in Missouri. I took a day off work to wait for Federal Express and set up three to six gallon tanks to accommodate my new Bettas. Of course, all tanks were full of reverse osmosis water with just the right additives to make the water slightly soft with pH 7.0. Each was maintained at 84 degrees with live plants present in all of them. My new fish were fed a large variety of fresh, frozen and freeze dried foods. When they seemed to be of the proper age and size to breed I carefully followed directions set forth by different breeders. I set up the spawning tanks, introduced the females in glass chimneys, kept the water level low and waited for the males to build nests. One of my three pairs built no nest at all. The other two males both built satisfactory nests. After a few days I released the females. I thought I had a success on my hands as one pair spawned. But as the days progressed, I noticed that the male had no interest in maintaining his nest. The bubbles burst and no fry were to be found. I am uncertain whether the eggs were not fertile or the father was negligent. The other pairs never spawned at all.

Meanwhile, a friend who had never kept fish before developed an interest in Bettas. She bought several from a local pet store and was keeping them in vases with a peace lily plant. Out of curiosity she poured a female into a vase with a male. Her female survived several days with the male while suffering very little noticeable abuse and spawned. I was floored, and a little jealous. Not that I didn't want her to be successful, but why if I tried so hard did I not succeed when she did?

Inspired by my co-worker's spawn, I went home and tried again. I selected the two fish that seemed to ignore each other and kept both in a small net breeder in one of my community tanks. After about a week of apparently not spawning, I removed the female since she didn't seem to be eating much. The next day when I looked in on the male, I was shocked. There in the middle of his nest was a mass of eggs. The next night when I checked on him again he was busy catching falling fry and ex-

tending his huge bubble nest. Unfortunately I lost quite a few babies. (I learned that the Angelfish in the tank can suck the newly hatched fry through the netting.) I have been moving the eggs from more recent spawns to a small tank to hatch out.

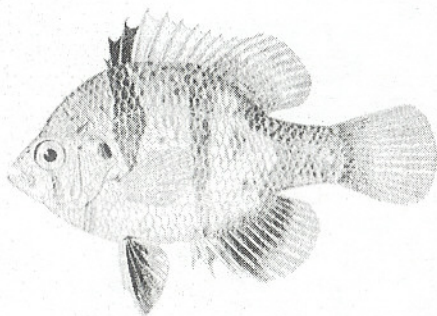
While I still attempt some spawns in the community tank, I have managed to settle on a set-up that my Bettas seem to approve of. Currently I use small Eclipse tanks divided in half with a piece of plastic craft mesh. The female and male are kept separate until spawning. No glass chimneys or jars - I have yet to have a female that would accept that scenario. I leave the filtration that is built into the tank running until the pair spawn and then swap it for the good old sponge filter/air pump combination. After the pair spawn, I remove them. Fry hatch in about three days and are fed newly hatched baby brine shrimp and possibly infusoria growing in the plants.

It used to be that everything I learned about fish keeping and breeding seemed so amazing. But lately, with all the technology available to exactly mimic water conditions and environments, I assumed that I could just coerce my fish into spawning. Perhaps I just needed to learn that technology doesn't guarantee success. Of course I won't stop watching water parameters. Nor will I give up mixing vitamins in with dried foods. As I sit here in my living room sorting out an inventory of chemicals and foods that could stock a decent sized local fish store, I will try to remember that I can try to mimic Mother Nature, but I am not the real thing.



Photo by PVAS member Andrew Blumhagen





THE BLACK-BANDED SUNFISH

*Enneacanthus chaetodon* (Linnaeus, 1758)

Image courtesy of the National Oceanographic  
and Atmospheric Administration

## The Black-banded Sunfish, Fragile Jewel of the East

Bob Bock

Imagine a fish that looks like a cross between an angel fish and a tiger barb, but with a gentler nature than either species. This fish really does exist, and can be found, among other places, in New Jersey. The black-banded sunfish, *Enneacanthus chaetodon*, has a compact body with a striking array of black bands on a white body, its ventral fins etched with orange. In their haste to possess this fragile jewel, many beginners often set themselves up for failure and end up killing the delicate creatures they coveted.

To survive, Black-bandeds need soft, acid water with no discernible hardness. They will steadfastly refuse flakes, pellets, and other prepared foods until they starve to death. These demure little sunfish also are extremely susceptible to ammonia waste and will soon sicken in the absence of good filtration and regular water changes. Unless you can consistently meet these conditions, you are destined to fail with these marvelous animals. But anyone who has successfully kept and bred discus probably also will succeed with these charming little fish. The Black-banded sunfish I've kept have done best in very soft water with a pH no higher than the mid-6's. My friend, Pierre Gagne, keeps them in brightly-lit tanks, which are injected with carbon dioxide and planted with *Vallisneria spiralis*. With CO<sub>2</sub> and intense lights the *Vallisneria* grow like weeds and, in the process, soak up

the fishes' nitrogen wastes and absorb calcium carbonate from the water.

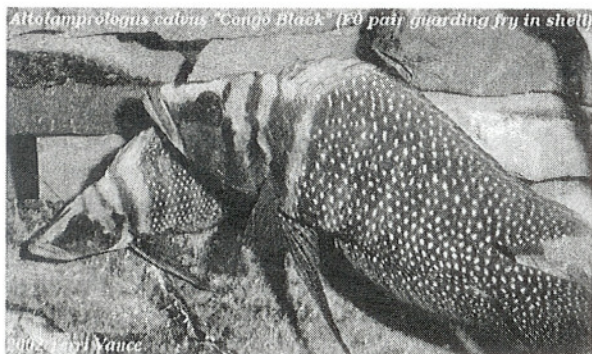
At first, wild caught Black-bandeds will eat only blackworms and other moving live foods. However, if you first pour frozen offerings through the filter stream to simulate movement, Black-bandeds will greedily accept frozen brine shrimp, bloodworms, glass worms, and finely chopped cooked shrimp. Pierre keeps his Black-bandeds with guppies. With a continuous supply of newborn guppies, the Black-bandeds remain well fed. If you don't have naturally soft, acid water coming from your tap, it will probably be best to either buy a distillation apparatus or begin collecting rainwater. I've had no luck with those ion exchange pillows. They merely exchange calcium carbonate and other dissolved solids for sodium chloride, which Black-bandeds can't tolerate either.

Black-bandeds breed like other sunfish, with the male staking out a nest site among plants or other cover. Females lay their eggs in the site, and then the males will drive them off. Like other sunfish, Black-bandeds males will guard their eggs until hatching and perhaps for a week after until the fry are free swimming. After absorbing their yolk sacs, the fry can take newly hatched brine shrimp. Some hobbyists maintain that, before they will spawn, Black-bandeds need to be kept at low temperatures for two or three months, to simulate winter. I've kept three or four in a picnic cooler in my back yard over the winter months. At about 40 to 50 degrees Fahrenheit, Black-bandeds don't need to eat much, and I've found that four or five blackworms per fish will keep them healthy.

Many states do not allow Black-banded sunfish to be collected. Before you collect Black-banded sunfish, or any other species, it's a good idea to check the regulations with local natural resource or fish and wildlife offices. Black-banded sunfish occur in New Jersey, Maryland, Virginia, Delaware, the Carolinas, and parts of Florida. Although I've collected them in the past under the terms of a scientific collection permit, I no longer remove these fish from the wild. Populations often are fragmented, and removing a few individuals can sometimes negatively affect them. Larger aquarium stores sometimes carry Black-banded sunfish, often bred from captive stock overseas. They are sometimes available on the Internet.

Continued on page 10





Photos by PVAS member Terri Vance

## Ron Nielson: Importer, Conservationist, Businessman, Spook, Dad

Nancy Johnson

PVAS members Ron and Charlotte Nielson live many a hobbyist's dream. Just a stone's throw from Baltimore Airport in Severn Maryland, they are breaking ground on a 500-600 tank hatchery building. Not even built yet, it's already half full—the Nielsons share their home with two little boys, Timmy age 5 years, and Tommy 4 months, and 300 fish tanks. Ron and Charlotte are both active-duty Army. Although Ron has kept fish since he was about 8 years old, he was never able to maintain more than a few small tanks between moves. Two years ago he was able to settle down and start raising fish. He graduated quickly from trading fish he had raised to selling them to fish stores in quantities that made it imperative to incorporate. "I kept reading about fish I couldn't get, and I was bored with what I could get. I also don't like getting fish of questionable lineage, so I started importing them myself," he explains.

Today, Ron sells books and foods in addition to fish from his web site, <http://www.fishpost.com>. Most of the live-stock listed on the site for sale are African and South American cichlids and scavengers, with some Central American and Australian species. "I guess truthfully the thing that intrigued me so much about fish is that I get bored easily," Ron adds. "There are so many fish that no one has really written about, and I can study a fish for hours on end and never learn enough. It was something that really sparked my interest, which led me to

the conservation issue. I'm getting fish most people have never seen, not all are endangered, but no one has them."

To learn and share more about rare fish, Ron started the Cichlid Conservation Working Group, easily accessed from a link on his web site. As a web-based working group, "we are getting involved with people from all over the world, ranging from serious hobbyists to scientists. We don't talk about everyday fish, though." The group is trying to recruit hobbyists to help with conservation efforts already underway, and set up programs with individual hobbyists willing to help preserve and bring to the hobby rare and endangered fish. If you would like to join them, use the link from Ron's web site to join the e-mail group, or take part in the on-line forum. If your organization or business would like to help with conservation efforts, you can use those links to learn how. Ron adds that the Conservation Working Group "is a great way to stay in touch with the hobby, because my life was being taken over by the business. I don't want to just be an importer, and forget why I'm importing those fish."

Ron also gives frequent talks to clubs, and this fall has had several dates in Ohio, New York and Pennsylvania. If you attended Ron's presentation at the PVAS meeting earlier this year, you know what a terrific speaker he is. Charlotte and Ron both work in military intelligence, Ron is Army First Sergeant a.k.a. Master Sergeant, and Charlotte is Sergeant First Class. Ron would have been able to retire this year, but the military is suspending many retirements now with the war on terrorism. But, working full time on high-tech secret projects doesn't really seem to slow Ron down much. "Once I get the new fishroom up, I will invite the clubs for a tour." Should be quite a show!



Terri Vance 2002



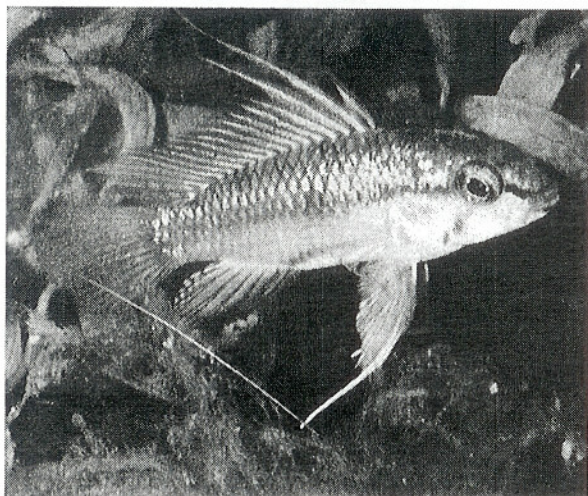


Photo by PVAS member Don Kinyon

## ***Apistogramma trifasciata***

Don Kinyon

This is one of the most beautiful of the *Apistogramma*. I've said that before, and meant it. But this one really is. Described by Eigenmann and Kennedy in 1903, this is truly a gorgeous fish. It's one of the thin-lipped species, and grows to 2 3/4 inches (male) and 2 1/4 inches (female). Though the wild specimens I have seen aren't quite as brightly colored as the fish I am working with, they are nearly as attractive. Most are collected from the Rio Paraguay. The males have so much color that one would suspect them to be one of the dyed fish sometimes found in pet shops. A healthy male will show a body color of bright metallic blue, which is also found on the dorsal, anal and ventral fins. The upper portion of the dorsal fin is orange/red and the first three or four spines are elongated and show more separation than the rest. There is a black eye-stripe, but it's not as noticeable as in most species. Fish from some locations show orange or red head markings, but mine were almost solid blue. There is little or no coloration in the tail. The females are pale yellow or brown with a dark lateral stripe, and bright yellow when spawning or during brood care.

I obtained a pair of these fish from a friend who has worked with the species for some time. The fish were out in front most of the time from the very first; I hate having an outstanding fish that's always hiding under a

filter or piece of driftwood. The tank was a homemade fifteen-gallon; longer and more narrow than the commercial ones. Two fairly large sponge filters accomplished filtration, and there were several pieces of driftwood for cover. There were several differently shaped clay pots for them to use as spawning sites, and some Java Fern to add more shade and cover. The tank was filled with collected rainwater: pH of 6.1 and hardness near 0 and kept at a temperature of 80 degrees. I had no trouble getting these fish to eat. They readily took live foods including daphnia, mosquito larva, white worms, black worms, and chopped earthworms. Frozen foods of bloodworms, beef heart, and brine shrimp, along with several brands of flake and freeze-dried foods were taken almost as well. Water changes were usually performed once a week, at about 40 percent with rainwater.

Within a week, the fish, or at least the female fish, started to show signs of spawning behavior. The female turned a brighter yellow, and pursued the male whenever he ventured into her end of the tank. She had chosen a medium-sized clay pot as her spawning site, and continually tried to entice the male to it. The male would flare his fins, turn sideways, wag his tail in typical Apisto fashion, and flee as fast as he could whenever they got close to her clay pot. This went on for several weeks, until one day I noticed the female in the pot not paying much attention to the male, who just looked too proud of himself patrolling the perimeter of the tank. I carefully lifted the pot a little and tipped it so I could see the

***"The male would flare his fins, turn sideways, wag his tail in typical Apisto fashion, and flee as fast as he could whenever they got close to her clay pot."***

inside. This didn't please the female, who was now a much brighter yellow, at all; she was busy guarding thirty or so pink and red eggs. The male didn't seem to be in any danger, and didn't seem interested in getting near the eggs, so I left him in the breeding tank. The female came out to eat, but that was all. She rarely paid any attention to the male now, just left him to cruise the area around the spawning site.

In just under a week, the mother and fry first ventured out of the flowerpot. It looked like about twenty-five of the eggs hatched into young *Apistogramma*, about three-sixteenths of an inch long. They followed the mother



fish very closely, and would dive for cover at any disturbance, even the male fish, if he passed too near. Now it seemed like the health of the father fish may be a little at risk, so I removed him to another tank, but not before his tail fin took a beating. I never saw the female attack, but from the reaction of the male every time she came near, it was a safe bet that she did the damage.

From the very start, the fry ate newly hatched brine shrimp with gusto, and grew accordingly. They still followed the mother for several weeks, but with no disturbances other than regular feedings and my occasional peeping, they grew more and more comfortable without the female's protection. By the end of the third week, they paid little attention to the female, even though she frantically tried to keep the brood together. To save her all the aggravation, I removed her from the fry.

Other than brine shrimp and occasionally micro worms, the fry seem to like to graze on the algae that grows on most everything in the tank (I grow the best algae in town). I've seen other species do this, but not nearly as frequently. By the time the mother was removed, they were eating sifted daphnia and ground-up flake foods, and were over three-eighths of an inch long. By week six they would eat anything the adult fish ate, only more finely chopped or ground, and acted much like the adults. By the time the fish were two months old, they were well over one half inch in total length, and very active. At this writing the fry are now the parents, and the cycle starts over again. Like many *Apistogramma*, the sex ratio of the brood is determined by pH, temperature, and probably other factors. Something must have been a bit off with the conditions I set up this time, because the mix turned out about 70:30 in favor of males.

As colorful as the males are, I'm not complaining.

Check Us Out on the Web!

**[www.pvas.com](http://www.pvas.com)**

featuring articles and  
photographs by PVAS  
members

## Trading Post

Plastic Fish Bags - many different sizes available, including 3 sizes of Kordon Breather Bags. Bag Buddies. Back issue aquarium magazines. See my web page [hometown.aol.com/ranchogooideid/index.html](http://hometown.aol.com/ranchogooideid/index.html) for details or send SASE to John Mangan, 12633 Oakwood Dr., Woodbridge, VA 22192

Plant Tank Gravel for Sale - Approximately 100 lbs of brown gravel with 45 lbs of Seachem Flourite added. Enough to cover 48" x 18" tank 5 inches deep. Can bring to meeting or Fall Workshop. Asking \$30. Pete Thrift 703.971.0594.

Java Fern available to someone who lives in the Fairfax area. They are of various sizes, up to perhaps 10- 12" in length, with good root systems. Bruce Waxman 703.323.0269 or [biwaxman2@aol.com](mailto:biwaxman2@aol.com)

180g Reef setup. Moved to Texas and cannot take my tank with me. I have over \$10,000 invested in this tank and need to get rid of it ASAP. I'd accept a rather low sale price in exchange for knowing this would be taken care of. Inventory is as follows: AGA 180g with Dual Corner Overflows; AGA Cherry Stand and Matching Canopy; Lifereef LFI-200 w/2 Pumps; 3x Lifereef Filter Cylinders; Lifereef Float Switch; Lifereef LCR1 Calcium Reactor w/Gauges and Electronic Solenoid; Octopus 3000 w/backlight; including X10 controller and over a dozen satellites (PH, Temp, ORP Probes need to be replaced); Salinity Monitor w/Probe; Custom Coralreefecosystems.com. Lighting setup: 3x 250w Metal Halide 10,000K (new bulbs-in July); 4 VHO 2xActinic 2x50/50 powered by 2x Icecap ballast. Live-stock is as follows: 400 lbs of Fiji Premium live rock; 2 Red-Sea Sail fin Tangs (One Purple, the other DeJardini); 2 Skunk Clown; 1 Mandarin; 2 Banded Serpent Stars; 2 Black Cucumber; Hundreds of snails, multiple species; Hundreds of Hermits, multiple species; Various Gorgonians (multiple colors); Huge Leather coral; Huge Sarcophyton; Some Hard Corals Star Polyps; Mushrooms; Etc, etc, etc. Call Joey Wright at (443) 995-3774 to make an appointment to see tank in Annapolis.

2002 hatch Ranchu goldfish for sale, \$5 or \$10 each depending on quality. Line bred strain from NY reeder; about 10 fish available. Also a few Egg-Phoenix. Russ Taylor ([rwt@nova.org](mailto:rwt@nova.org) or 703-319-7880, leave message).



## *Corydoras napoensis*

Don Kinyon

Sometimes, through meticulous care and careful attention to the fishes' diet, you can get a new or favorite fish to spawn in your aquarium. Other times, through inattention, lack of good care, and poor maintenance almost to the point of neglect, the fish spawn anyway.

*Corydoras napoensis* is a very attractive fish that certainly deserves the best of care. From the Rio Nanay, near Iquitos, Peru, comes this nicely patterned catfish. There are also populations in Ecuador in tributaries of the Rivers Aquarico and Napo, from which the name is taken. Nijssen and Isbrucker first described it in 1986.

My particular fish were wild caught in Peru by Julio Melgar on one of his collecting trips. The fish came to me unnamed, as I think he wanted to see if I could figure out what exactly they were for myself. There were later discussions over what the fish must be, and for a long time we didn't agree on the species. I, armed with every *Corydoras* book printed in English, said the fish must be a *nanus* species. Julio, on the other hand, had a vastly superior knowledge of all things aquatic, the exposure to some of the best minds in the science and hobby of fish, and knew the pinpoint location of where the fish were collected. He argued that they must be of the species *napoensis*. I lost.

These fish had most physical traits in common with other *napoensis*: a short snout, fairly high dorsal (especially males) and a mottled gold and black color pattern, with a large black patch on the otherwise clear dorsal fin. The male will grow to be about two inches long, the female a little larger. As with most *Corydoras*, when viewed from the top or bottom, the female has a much more rounded body from the insertion of the pectoral fins to the anal fin. When the light is at the right angle, the gold in the body will show a violet iridescence. The difference in my fish is that the pectoral, ventral and anal fins are bright yellow, and the dorsal, caudal and adipose fins are a pale yellow.

When I received the group of fish, which turned out to be three pair, I set them up in their own 28-gallon tank, with soft, acidic water at about 74°. There was an outside filter and a power head in the tank to add oxygen and turbulence. They fed mostly on live foods: black worms, white worms, and chopped earthworms, along

with frozen bloodworms and grated beef heart. They grew rapidly and the females swelled with eggs, and for a while it seemed that spawning was imminent. The fish would be particularly active after a water change, which they got weekly at about forty percent, but nothing more happened. I experimented with colder water, larger changes, letting more time go between changes, and the usual tricks, but none worked. Eventually I trained more attention on other fish and the *napoensis* fell to a lesser priority.

It must have been several months later that I once again noticed them. Not for themselves, but for the tank they were in. I returned from a trip to a distant fish store and, as is my habit, I came home with more fish than I had tanks for. A particularly nice pair of *Apistogramma* species needed a home, and one of the options was to put them in with some of my *Corydoras* catfish.

Just to make sure the change of conditions wouldn't shock the cichlids too much, I checked the water they were in from the store: (7.0 pH) and the water in the *Corydoras napoensis* tank: (ouch, a little acidic: 3.9!). Now, I know better than to add my well water, which contains some strong buffers and is 7.4 pH, to a rain water tank that already has fish in it, especially one that's gone acidic. Of course, for whatever reason, I did it anyway. In a matter of a few hours the pH rose from the low level it started at to a more reasonable 6.6. I don't recommend this, and I'm sure most fish wouldn't tolerate it well, but the little cats showed no outward signs of stress. They ate well that evening, and didn't seem a bit bothered by the radical change of water conditions or the new tankmates.

The next morning when I checked on the fish to make sure that the *Apistogramma* made the transition all right, I was surprised to find seventy-odd small amber eggs on the glass. They were placed singly for the most part, and most were close to the water line of the front glass, with some on the body of the power head. A few spots on the glass showed that eggs had been removed, possibly by the parents, but more likely by the dwarf cichlids. I removed the eggs that were left to a three-gallon tank for hatching.

A small tank such as the three-gallon works well with most *Corydoras* eggs. I fill them about half way, add a little acriflavin to control fungus, add an air stone to keep the water circulating, and wait for them to hatch. It's a good idea to check on the eggs at least once a day to



remove any bad ones that start to grow fungus. When they hatch, instead of daily water changes, they get water additions to bring the water level up a little at a time. Once the level reaches the desired level, the air stone comes out, a sponge filter takes its place, and daily water changes of 3/4 gallon can start.

These eggs started to hatch in four days at 74°, and the last fry were out of their shells by day six. The fry look like an egg with tail, and don't eat for another three to six days. Once the fry were eating, they grew rapidly. Micro worms are the basic diet for any *Corydoras* fry in my care, and they seem to do well with them. At two weeks the young were smaller versions of their parents and, at one month old and 3/8 of an inch, started to show some of the body markings of the adults.

At about a month, the young catfish were outgrowing their quarters, so a 15-gallon tank had to be filled with the same water to about the same level as the smaller tank. I set the three-gallon tank inside the larger one and let the stream from the outside filter run into the top of the smaller tank and overflow into the larger. This let the fry adapt to any differences that may occur in the new tank more slowly. After a few hours, I unceremoniously dumped and removed the smaller tank. The fry were unaffected. They now got 35 percent water changes twice weekly.

The roomier tank and frequent water changes did wonders for the growth of the fry. They ate more, were more active and seemed to get heavier and longer by the day. At seven weeks the young had the same mottled pattern as the parent fish, and were over 5/8 of an inch long. By now they were eating some fine flake foods, newly hatched brine shrimp, and decapsulated brine shrimp eggs along with the micro worms. This change of diet may also have added to their higher growth rate.

At ten weeks, I split the fry up into other tanks. It wasn't so much that they had outgrown this one, but there was another bunch of *Corydoras* fry that needed it. A few went into the breeding group with the older fish, and some went to a larger growth tank with other catfish that would eventually be sold, auctioned or given away.

*Corydoras napoensis* is an undemanding fish to keep, breeds easily when the conditions are right (on purpose or accidentally), and a very attractive ornamental. Though it's not very common in the hobby, it's a fish that is worth seeking out.

## Contributing Shops and Manufacturers

Don Kinyon

One of the reasons our meetings, workshops and auctions are successful is the support we get from manufacturers, their representatives, and local aquarium shops. We would like to extend our thanks to all who donated their products, time and effort to make our event successful. A special thank you to Aquaria Incorporated (Marineland) and their ambassadors, who always add generously to our events, to Ray Lucas of Kingfish Services, who adds as much with his sense of humor and company as he does with his donations, and to Totally Fish, a local aquarium shop that never misses an opportunity to give us unsolicited support.

### Supporting Shops

Totally Fish  
Tropical Fish World

### Supporting Manufacturers

Aqua-medic, Inc.  
Aquarium Pharmaceuticals, Inc.  
Aquarium Systems, Inc.  
Boyd Enterprises, Inc.  
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Fresh and Marine Aquarium Magazine  
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Kent Marine, Inc.  
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Mardel Laboratories Co.  
Marineland Aquarium Products  
Novalek, Inc.  
Ocean Star International, Inc.  
Omega Sea, LTD  
Pennplax Plastics, Inc.  
Rainbow Plastics  
Rolf C. Hagen (USA) Corp.  
Tetra/ Second Nature  
Tropical Fish Hobbyist Publications



## Snakeheads

### The Fish, not the Chinese Gang

Bill Duzen

*This article was first published in the April 2002 edition of the Hamilton and District Aquarium Society Monthly Bulletin.*

We're talking about fish, not guns and knives, drugs and drive-by shootings. I was surfing the internet, went into Google.com and did a search for Snakeheads and found out more than I wanted to know about Chinese gangs; but then, I digress. The genus *Channa* of Asia and the genus *Parachanna* of Africa are comprised of fishes commonly known in the hobby as Snakeheads. These are elongated eating machines, and many of the species of these genera are themselves eaten by various people around the world. In fact, because of the ability of this fish to be crowded, Asian farmers can reach yields of 15 tons per hectare of pond. These fish come in sizes ranging from 8 inches to close to 3 ½ feet! Unfortunately, the only ones commonly seen in the shops are the pretty Redline Snakeheads (*Channa micropeltes*) that everyone buys at 2 inches because they are a deep red with a couple of black horizontal lines, only to have them grow to almost 40 inches! We often see the Peacock snakehead (*Channa marulius*) but this one grows to be just as large. On occasion you might see *Channa stewarti* (12"-16") or *Channa lucius* (20") and sometimes *Parachanna insignis* or *obscura* at (13"-16"), but never any of the relatively small species like *Channa orientalis* or *gachua* that top out at 4" to 10" but breed at a much smaller size. So when I was at my good friend Dave Franco's shop and saw that he had a pair of *Channa orientalis* in one of his 30 gallon breeder tanks and the pair was putting the tank to good use raising a cloud of fry, I immediately inquired about the chance of obtaining a few. The fry were less than an inch long and not ready to be moved. We decided I would come back in a couple of weeks.

I went back to Rochester in a few weeks and Dave let me have as many as I wanted. The fry were now a couple of inches in size. Dave seemed to think that the fry with a dark spot on their dorsal fins were females. I netted three "pairs" with that in mind. The fry were brought back home and put into a bare bottom 29 gallon tank with a large sponge filter, a stand of Java moss and large leaf duckweed floating on top of the water. Water temperature

was a constant 78 degrees and the pH was about 7.2. The fish had been eating flake and frozen foods for a few weeks so I started them on frozen brine shrimp. These fish are PIGS! They will eat until they can hardly swim and then eat some more. A few hours after gorging themselves they will look like you haven't fed them in days, and are ready to eat again. The fish also relish cut up earthworms and krill. Because the freeze dried krill tend to float and the fish eat so fast, they ingest air with the krill and have a hard time swimming for a while. Because of the heavy feeding regimen, a good filter and 50% weekly water changes are a must.

*Channa orientalis* is distributed from Afghanistan across the entire Indian sub-continent including the Sunda islands and Sri Lanka and will grow to between 4 and 7 inches depending on what "expert source" you want to believe. The body of the fish is olive brown with the fin rays being streaked in blue. Dorsal and caudal fins are edged in orange and the anal fin is edged in white. The pectoral fins have alternating horizontal bands of black and deep orange. As the fish grew, the dark spot on the dorsal fin of the 'female' disappeared and they all looked alike. So I really can't tell if Dave's assumption was right. These are labyrinth fishes, just like Bettas and Gouramis, and must have atmospheric air. They come up to the surface and gulp air just like they gulp their food. When they expel the air, rather large bubbles float to the surface. In the wild these fish are very often found in low

***"Channa orientalis is distributed from Afghanistan across the entire Indian sub-continent including the Sunda islands and Sri Lanka and will grow to between 4 and 7 inches depending on what 'expert source' you want to believe.."***

oxygen or stagnant waters and need the extra air to survive. They can survive temperatures from 104F down to 40F. There is even a dwarf population from mountain streams. One thing to remember is that these fish can jump. I am talking, "hit the ceiling" type jumping; so a covered tank is a must.

*Channa orientalis* is one of the mouthbrooding Snakeheads. After a few months my snakeheads were about four inches. I did not witness my pair spawn but according to accounts they spawn much like bubblenest builders, with the male wrapping his body around the fe-



male and then gathering up the floating eggs in its mouth. My male seemed to darken up a few days before spawning. The female didn't seem to be any fatter before spawning. This might very well have been because of the age of the fish. The pair seemed to be hanging around a flower pot that was laying on its side near the corner of the tank. They would join the other four snakeheads for food but then would return to the corner. The male would display before the female but that is as far as it went. Neither of the fish seem to be guarding a territory. A few days later I noticed that the male had taken over the flowerpot and did not come out to feed. The female now drove the other four snakeheads away from this corner of the tank. This went on for four days before I first saw the fry. The fry were about 1/2 inch in length and gray with a black stripe. They stayed on the bottom of the tank near the flower pot and were guarded by the male but never re-entered the male's mouth. The female now seemed to lose interest in the pair bonding. I decided to remove the fry to another tank. I was able to net out 14 fry. I am sure that more were lost in the mulm on the bottom of the 29 gallon tank. After I removed the fry the female beat the male badly and he hid in the java fern for a few days. Like the Bettas, these fish seem to have remarkable recuperative abilities and are able to heal very fast. After a week, the battered male, with fins ripped and scales missing, looked like nothing had happened and stopped hiding in the Java Fern.

The fry were placed in a bare five gallon tank with a box filter and a sphere of Java moss. They were started on newly hatched brine shrimp and quickly grew. After a week they were almost 3/4 of an inch and the baby brine shrimp feedings were supplemented with week old convict cichlid fry that quickly disappeared. I will have to transfer the fry to a larger tank very soon.

There seems to be two variations of *Channa orientalis* – one with ventral fins and one without ventral fins. Mine have the fins. This is where it gets strange. The eggs of the ones with fins, hatch in 3 to 4 days and the others hatch in 9 to 10 days. Fish with the fins will have broods of 10 to 40 fish and the ones without the fins will have broods of up to 200 fry. The fry and adults of both variants differ in behavior as well. There are even some reports that the ventral-less fish were not mouthbrooders and the eggs floated to the surface and were guarded by the male there. The strain from Sri Lanka lacks ventral fins and the strain from colder climates have ventral fins and have not been observed to be mouthbrooders. However the literature that I have found seem to confuse ven-

tral and pectoral fins and the lack of, so take this for what it's worth. There is a fish similar to *C. orientalis* in both size and coloration, *C. gauchua*, that has ventral fins and that may be where some of the confusion lies. *C. gauchua* is also a sometimes mouthbrooder but has larger batches.

Ref:

*Labyrinth Fish* by Helmut Pinter

*Baensch Aquarium Atlas* Vol. 1 and 3 by Riehl and Baensch

Snakeheads of the World [www.fishace.demon.co.uk/snake/25orien.html](http://www.fishace.demon.co.uk/snake/25orien.html)

*Naturalists Guide to Freshwater Aquarium Fishes* by J.J. Hoedeman (from Some Things Fishy, TFCEC, 03/02)

## BAP Checkers

Checker	Area
David Snell.....	Centreville/Chantilly/Manassas
(703) 968-9084	
Mike Cardaci.....	Centreville
(703) 222-3833	
Dov Goldstein.....	Frederick
(301) 694-7582	
Don Kinyon.....	Manassas/Rte 66 Corridor/
(540) 635-9559	Far West Suburbs
Gene Moy.....	Mt Vernon/Alexandria
(703) 765-0865	
Rick McKay.....	Oakton/Vienna
(703) 281-1647	
Francine Bethea .....	North Prince George's County
(301) 809-3894	
Lorne E Williams.....	South Prince George's County
(301) 630-7674	
Pete Thrift.....	Springfield/Franconia
(703) 971-0594	
Gerry Hoffman.....	Warrenton/Manassas
(540) 347-7486	
John Mangan.....	Occuquan/Lake Ridge
(703) 491-4980	



Line drawing by PVAS member Gene Moy



## 2002 TROPICAL FISH SHOW CLASSES/CATEGORIES

### CLASS CATEGORY

#### I Livebearers

- a. Guppies
- b. Mollies
- c. Swordtails & Platies
- d. Goodeids
- e. All Other Livebearers

#### II Egg layers (Non-cichlid)

- a. Catfish, Corydoras
- b. Catfish, African
- c. Catfish, All Other
- d. Betta splendens
- e. All other Bettas & Anabantids
- f. Characins (Under 3" Mature)
- g. Characins (Over 3" Mature)
- h. Sharks & Loaches
- i. Goldfish
- j. Barbs
- k. Danios, Brachydanios, & Rasboras
- l. Killifish
- m. North American Natives
- n. All Other Egg layers (Non-cichlid)

#### III Cichlids

- a. New World, Large (Over 7" Mature)
- b. New World, Large (4" to 7" Mature)
- c. New World, Dwarf (Under 4" Mature)
- d. Angelfish
- e. Discus
- f. Rift Lake, Malawi
- g. Rift Lake, All Other
- h. All Other Africans

#### IV Marine

- a. Fish
- b. Invertebrates

#### V Plants

#### VI Biotope Tanks

#### VII Photography

- a. Slides
- b. Prints

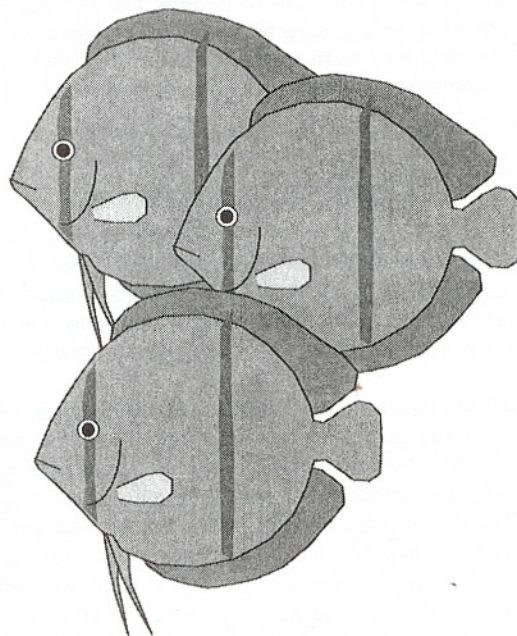
#### VIII Arts & Crafts

*Black-banded Sunfish, continued from page 2*

It may also be a good idea to prepare for Black-banded by keeping a similar species. The banded sunfish, *Enneacanthus obesus*, and the blue-spotted sunfish, *Enneacanthus gloriosus*, are both easier for beginners. Both are more numerous in their East Coast ranges and are slightly harder than the black banded sunfish. With striking green or gold spots, both species are beautiful in their own right and allow you to try your hand with a fairly demanding fish without first risking failure with the rarer Black-banded.

Bob Bock is past president of the North American Native Fishes Association, [www.nanfa.org](http://www.nanfa.org).

Another group with an interest in U.S. native fishes is the Native Fish Conservancy, [www.nativefish.org](http://www.nativefish.org)



*Line drawings by PVAS member Gene Moy*

PVAS meetings are held at the John C. Wood Facility, Fairfax, Virginia. Directions and map are printed on the back cover of the Delta Tale.



## **PVAS is Proud to Announce its 2002 Tropical Fish Festival, Show and Auction**

Saturday & Sunday - October 26 & 27

Best Western Hotel  
6633 Arlington Blvd.  
Falls Church, VA  
703-532-9000

### **Saturday, Oct 26**

Four great workshops  
PVAS's first show in several years!  
Banquet, cash bar, and show awards

### **Sunday, Oct. 27: All Day Auction!**

Registration begins at 9:30 a.m., seller registration closes at 11:30 a.m., bidding begins at 10:30 a.m. Wonderful bargains, huge numbers of healthy fish raised by our members, plants galore and all sorts of new and used equipment! Raffles throughout the day. No fee to register; sellers pay a minimum of \$2 per item or 1/3 of selling cost.

### **The Workshop Speakers**

10 am — **Peter Thode**, owner of Gwynnbrook Farm Discus Hatchery, will provide an entertaining glimpse into the business side of the tropical fish hobby. Fans of all types of fish - not just discus - can look forward to Mr. Thode's presentation on turning a one-time cow pasture into a thriving discus hatchery with nationwide sales.

11:30 am — **David E. Boruchowitz**, a hobbyist with a half-century of experience, has dedicated his professional life to helping others enjoy lifelong success keeping tropical aquarium fish and other aquatic species. An author of numerous books & articles, Mr. Boruchowitz recently returned for a second stint as Editor of Tropical Fish Hobbyist. Mr. Boruchowitz will present his African Cichlid workshop and as guest speaker at Saturday's banquet, will give a presentation on the current state of the tropical fish hobby.

2 pm — **Christopher Scharpf**, a member of the Board of Directors of the North American Native Fishes Association (NANFA) and editor of the NANFA publication, American Currents. Mr. Scharpf will present the workshop "Freshwater Fishes of North America: Diversity, Natural History, Conservation and Aquarium Care." With over 1000 species, North America has the largest tem-

perate fish fauna in the world. With one in three species at risk of extinction, it's also one of the most imperiled. This presentation introduces hobbyists to the diversity and natural history of the fishes we have here at home, surveying which species make good subjects for the home aquarium, and what's being done to save imperiled fishes in the wild. The role of the fish hobbyist in fish conservation is also discussed.

3:30 pm — **Dr. David Schleser**, former Curator of Aquatic Biology at the Dallas Aquarium, began his career as an aquatic biologist after 19 years as a dentist. In 1995 Dr. Schleser resigned to work for Nature's Images, Inc., a natural history company he helped establish, and take frequent collecting trips to the Peruvian Amazon. As a member of Marineland's speaker's bureau, Dr. Schleser will be presenting a wonderful slide show on his Peruvian Amazon collecting experiences. In addition the talk presents an introduction to Amazonian ecology and biodiversity, including climate, insects, reptiles, mammals, and herps.

Registration for all four workshops is \$12 for non-members, free to members. The \$12 registration fee puts you on our mailing list unless you request otherwise.

A cash bar and banquet is open to all starting at 5:30, banquet reservations must be made by Oct. 7<sup>th</sup> (details will be posted on the web site). David Boruchovitz will speak again at the banquet, and show winners will be announced.

For more information see the PVAS web site or contact Nancy Johnson, PVAS President.

### **The Show**

Competition is open to anyone. Enter your fish in one of eight classes: Livebearers, Egg layers (Non-cichlid), Cichlids, Marine, Plants, Biotope Tanks, Photography, and Arts & Crafts.

Awards will be announced at the banquet that night. Entry deadline is Oct. 7<sup>th</sup>. Entry fee is \$2 per fish or tank; one fish per tank. PVAS will provide 5 1/2- and 10-gallon tanks. Tanks up to 20 gallons are permitted; entrants must provide their own. PVAS will provide a sponge filter and constant air supply for each tank.

For more information, contact the Show Chairman, Joe Szelesi, via e-mail or at 301-702-0977 (weekdays from 6 p.m. to 9 p.m. and weekends from 2 p.m. to 4 p.m.).



## SHOW ENTRY FORM

### Instructions

To facilitate entry registration, ensure the protection and return of your entries, and allow PVAS to notify you of future events, complete this form in its entirety. Under *Class*, fill in the competition class for each entry. Under *Category*, fill in the competition category for each entry. Under *Number of Entries*, enter the total number of entries per category. For example, 2 swordtails would be listed: Class-I, Category-c, and Number of Entries-2. Entry fees are \$2.00 per entry. Multiply the total number of entries by \$2.00; this amount is the total costs for entries. 5½- and 10-gallon tanks may be reserved for purchase @ \$4.00 each and ATI-II sponge filters @ \$3.00 each. On the final line, enter the total costs of all entries, tanks, and filters.

### Registration deadline

All entry forms must be received by October 7<sup>th</sup>, 2002. Entry forms will NOT be accepted after the October 7<sup>th</sup> registration date. (Entry forms may also be turned in at the October 7<sup>th</sup> PVAS meeting.)

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### MAIL THIS FORM TO:

Potomac Valley Aquarium Society  
P.O. Box 664  
Merrifield, Virginia 22116

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Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ E-mail \_\_\_\_\_

Class	Category	Number of Entries
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Total cost for entries (no. entries X \$2.00)

Cost for 5.5-gallon tanks (no. tanks X \$4.00)

Cost for 10-gallon tanks (no. tanks X \$4.00)

Cost for ATI-II filters (no. filters X \$4.00)

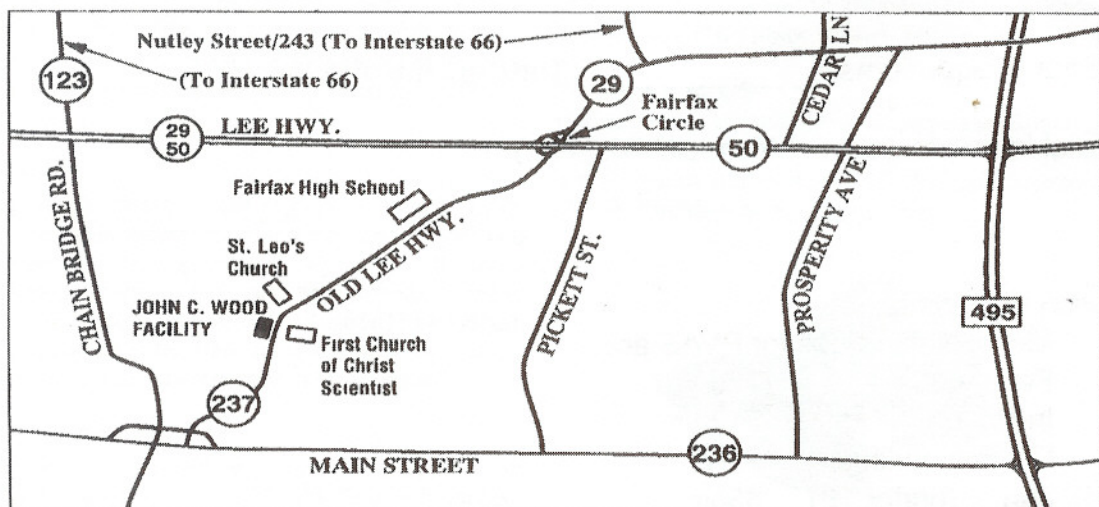
**TOTAL COST**



# POTOMAC VALLEY AQUARIUM SOCIETY

P.O. Box 664

Merrifield, VA 22116-0664



**MEETINGS:** are held at the John C. Wood Facility, 3730 Old Lee Highway (Route 237), Fairfax City, VA. We meet in Room 6, which is located behind the police station. Doors open at 7:30 and meetings start at 8:00 p.m.—**EVERYONE IS WELCOME!**