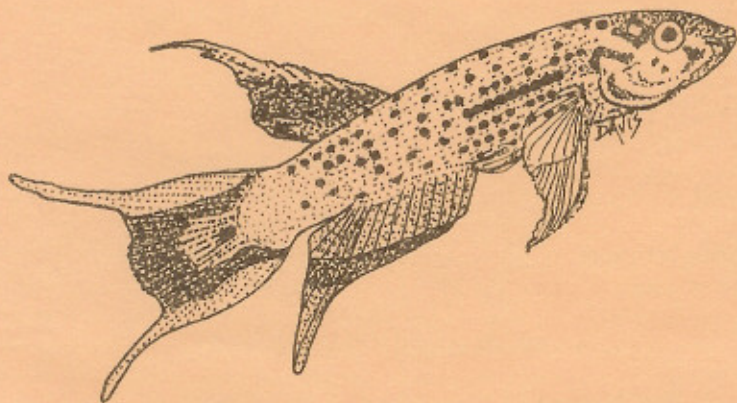


# \* DELTA TALE \*

Sept/Oct 1996  
vol.27, #5

OFFICIAL PUBLICATION OF

potomac valley aquarium society



The *Delta Tale* is published bimonthly 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 by the dissemination of information and advice, and the promotion of good fellowship among the membership by organized activities and competitions.

All correspondence to the society and to *Delta Tale* should be directed to P.O. Box 664, Merrifield, VA 22116.

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All materials for inclusion in *Delta Tale* must reach the editor by the 10th of even numbered months (Feb.,April, etc.).

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## *Frum the editor's desk*

It's hard to believe that Summer is over and Fall is here. Time to get back into your fishroom and repair all the damage caused by a summer of neglect. This is a good time to go around and make sure that all of your heaters are working properly before the real cold weather gets here and you find out the hard way that they aren't.

Fall also means it's time for a couple of other things. First- the PVAS Fall Workshop and Auction are coming up real soon (Oct. 26 & 27). We have a great selection of speakers this year including Peter Thode, Bob Goldstein, Rusty Wessel, Chris Andrews, Jim Karanikas, and Ray Lucas. The workshop is **FREE!** so you don't have any excuse for not attending. There will also be a banquet (with Ray Lucas as Banquet Speaker) after the workshop. You must register in advance for the banquet. Tickets are \$20. This will all be followed on Sunday by another of our famous auctions. If you've never been to one plan to attend, you won't be sorry. There's always LOTS of fish, from common to very rare, plants, and equipment to be auctioned. Have some excess fish, etc.? We'll be glad to auction it off for you. Anything fish related, but please make sure it is in reasonably good condition. Please read the rules (elsewhere in this issue) carefully.

Something else that occurs each Fall is the PVAS election of officers for the following year. We need some new people to get involved in running things. I urge all of you to consider running for an office. You don't need any special knowledge or experience for any of the positions. Those of us that have been doing all of these jobs for (too) many years will be glad to offer any help or advice that you need to learn a job.

**NOTICE-** The Oct. meeting has been canceled. Our normal meeting day falls on the same day as Columbus Day\* and the John C. Wood Facility is closed. Since the workshop is so close after that it was decided not to reschedule the monthly meeting. Everyone is encouraged to come to the workshop instead (\* one of *Delta Tale's* investigative reporters has recently discovered that PVAS member Ray Hughes was a member of Columbus' crew - he was the one that told Columbus "This must be India, just look at all of those Indians over there.")

PVAS is now on the Internet. PVAS member Dave Snell has created a Home Page for us and is maintaining it. For more information on this see Dave's article on the following page.

Until next time ...



## <http://www.erols.com/dsnell/pvas.htm>

### PVAS and the Internet

If you are not sure what "<http://www.erols.com/dsnell/pvas.htm>" means, it means that PVAS is now on the Internet. After giving a demonstration at the August monthly meeting and receiving official approval, the PVAS Home Page went live on the Internet on August 28, 1996. As of September 8, 1996, there were over 90 hits on the PVAS Web site. (A hit is the term used to keep track of the number of times a web site is accessed).

The PVAS Web Site has information on the following items:


1. An On-line Membership Application
2. Fall Workshop and Auction Information
3. Complete Breeder's Award Program Information
4. Activities and Events Calendar
5. Listing of PVAS Officers and Committee Members
6. Bowl Show Information
7. An Archive of Articles written by PVAS members
8. and more . . .

New items are in the works to include an On-line Trading Post, a list of PVAS Members to include email addresses if available, a list of Supporting Aquarium/Pet Shops, and Links to other aquarium related web sites.

If you have a computer with Internet access, please visit the PVAS Home Page. If you have any suggestions, comments, ideas for the PVAS Web site, or if you would like to help out, please let me know.

David J. Snell  
[dsnell@erols.com](mailto:dsnell@erols.com)  
[www.erols.com/dsnell/pvas.htm](http://www.erols.com/dsnell/pvas.htm)

# WHAT'S HAPPENING!

 For up to the minute information on what's happening call the free PVAS hotline anytime. (703) 352-3365

**Oct. 14:** PVAS Monthly Meeting **CANCELED** Our meeting place is closed due to the Columbus Day holiday.

**Oct. 26 & 27:** PVAS Fall Workshop & Auction. The Free Saturday workshop will have a full day of speakers on a variety of topics. Saturday night banquet featuring Ray Lucas. Tickets \$20, must be purchased in advance. Sunday giant PVAS Auction. See following pages for complete details.

**Nov. 11:** PVAS Monthly Meeting. Program- Introduction to Fish Breeding, by John Mangan. This program will cover a wide variety of fishes- Angelfish to Zebras, easy to difficult. Bring your questions and problems, audience participation will be strongly encouraged. Also- all of the usual stuff: bowl show, mini-auction, raffle, door prize, refreshments. In addition to the above there will also be election of officers for 1997. Nominations will be accepted from the floor. Doors open at 7:30, meeting begins at 8:00. Additional parking available next to the Wood Facility in the school and health center lots.

**Dec. 9:** PVAS Christmas Dinner. Instead of a regular meeting we will have our traditional Christmas dinner/party. PVAS will provide a main course, everyone else should bring a side dish or desert. There will also be a gift exchange. Bring a small, fish related, wrapped gift and receive one in exchange. Breeders Award Certificates and Bowl Show Awards will also be presented. Everyone is encouraged to come and bring along family or a guest. **Note:** Everything will start at 7:00 instead of our usual starting time of 8:00.

## TRADING POST

PVAS members may advertise in the trading post at no charge. Send ads to *Delta Tale*, c/o John Mangan, 12633, Oakwood Dr. Woodbridge, VA 22192.

For Sale: backissue aquarium magazines. Many different titles. Send SASE for catalog. John Mangan, 12633 Oakwood Dr., Woodbridge, VA 22192.

*The Potomac Valley Aquarium Society*  
**Fall Fish Festival!**

A weekend of tropical fish fun featuring an outstanding slate of internationally known speakers and our annual fall auction, which has grown to be one of the biggest and best in the country!

Saturday and Sunday

**Oct. 26th & 27th**

*Speakers scheduled to appear include:*

**Peter Thode** - of Gwynnbrook Farm Discus and Angelfish Hatchery  
*"Discus"*

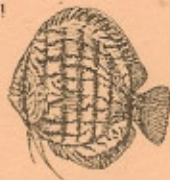
**Bob Goldstein** -author of several aquarium books.  
*"Native fish for the Aquarium"*

**Rusty Wessel** -from the American Cichlid Association.  
*"Fish Collecting in South America"*

**Dr. Chris Andrews** -a Senior Director of the National Aquarium in Baltimore.  
*"Conservation and the Aquarium Industry"*

**Jim Karanikas** -a marine biologist and owner of Tropical Fish World in Gaithersburg.  
*"Making Saltwater Easy!"*

**Ray "Kingfish" Lucas** -a manufacturer's rep with a display featuring hundreds of the latest items available for the tropical fish enthusiast. He is also a noted aquarist and will speak at the banquet.



The workshop and auction will be held at the Howard Johnson Motor Lodge, 5821 Richmond Highway, Alexandria, Va. (Route 1, just south of the Beltway). For lodging information, please contact the hotel at 703-329-1400.

The featured speakers will give presentations at different times throughout the day Saturday and a banquet will be held Saturday night. The auction will be held on Sunday.

**Attendance to the workshop is FREE!**

Tickets for the Saturday night banquet are \$20 and must be purchased in advance.

## **WORKSHOP SCHEDULE**

### **Saturday, October 26**

- 9 am.....Registration desk opens for workshop late registration.  
10 am.....**Peter Thode** - "Discus."  
11 am.....**Chris Andrews** "Conservation and the aquarium industry."  
Noon.....*Lunch break.*  
1:15 pm.....**Rusty Wessel** - "Fish Collecting in South America"  
2:30 pm.....**Bob Goldstein** "Native fish for the aquarium"  
3:30 pm.....**Jim Karanikas** - "Making Saltwater Easy!". And time permitting,  
Jim will also have the presentation "Rainbows".  
5:30 pm.....Cocktail hour. (Cash bar)  
6:30 pm.....Workshop banquet.  
7:30 pm.....Banquet speaker **Ray Lucas**.

### **Sunday, October 27**

- 9 am.....Auction registration opens.  
11 am.....**Auction begins.**  
6 pm.....Approximate time for end of auction.

**For more information please contact Rick McKay at 703-281-1647.**

*Visit the PVAS Internet home page!*

<http://www.erols.com/dsnell/pvas.htm>

### ***PVAS FALL WORKSHOP AND BANQUET REGISTRATION FORM***



This year, attendance to the workshop ***IS FREE!***

***Banquet tickets must be purchased in advance.***

Please check appropriate boxes.

**WORKSHOP**

**BANQUET BUFFET**

**\$20 per ticket:**

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

RETURN ASAP TO: Rick McKay/PVAS Workshop  
9713 Bunchberry Place, Vienna, VA. 22181



### Corydoras Aeneus Albino

Corydoras catfish have always been one of my favorite aquarium fishes. One would be hard pressed to find a hardier, more docile aquatic pet. I, like most everyone else in the hobby, has had these little fish since the beginning, but until just recently I didn't spend time or energy to get them to spawn. I purchased a large pair at the fall auction last year, and along with four smaller fish that I had already had, they formed the breeding group.

The only tank available at the time was a five gallon cube-shaped one. I put in a small sponge filter and left the bottom bare except for a few small stones, and filled the tank two-thirds to the top with soft, acid water. The temperature in my fish room is in the high seventies or low eighties this time of year, so a heater wasn't needed. I fed the breeders a diet heavy in worms and frozen beef heart, supplemented with dry food of various types. Within a week they were laying eggs.

All the literature that I have read says Corys won't eat their own eggs. I can't say that I agree. Even though my particular fish were very well fed, the eggs never lasted the night. After three unsuccessful spawnings, it was obvious that I would need to do something different. I removed the group the next time the fish spawned, and got about thirteen young. I have since had better luck removing the eggs with a razor blade and hatching them in another tank.

I would certainly recommend these easy catfish to anyone wanting to get their feet wet with corydoras.

Don Kinyon PVAS



## THE WONDERFUL FOUR EYES

by Tom Neal

In my aquatic career I have kept and bred many species of fishes. I've been through the various fazes including: cichlids, catfish, killifish, and all of the others. Like most of you, the very first fish that I bred was a livebearer, a platy to be exact. They say that life is an endless circle. That we always return to our roots. That is what this article is about, returning to my roots, the livebearers. Not just any livebearer mind you, but the wonderful four eyed fish scientifically known as *Anableps anableps*.

This wonderful livebearer is found in coastal water ranging across Northern South America. They are largely brackish water animals that live near mangrove swamps, even though they have been found in strictly marine and/or freshwater habitats.

Full grown adult females reach over a foot in length, while the males are slightly smaller. The top of the animal is an olive brown in color. The belly is very white. The mouth is turned upwards, a great help in snatching insects from the water's surface. They are very well adapted for life at the surface of the water.

The peculiar thing about this animal is its breeding habits. You see, this animal has adapted a peculiar breeding strategy, the male's anal fin (the organ used for fertilization), swings only to the left or to the right, not both ways. On the other hand the female's vent is slanted to the left or right. This means that she can only be impregnated by a male whose anal fin swings in the right direction. In other words, a left handed male must mate with a right slanted female and vice versa. This means that just because you have a male and female doesn't mean you have a compatible pair. I find that if you want to try to breed these animals then you should start with one male and several females. This will increase your chances of obtaining a breeding pair and/or colony.

Keeping these animals isn't very difficult as long as their needs are met. Their aquariums must be very warm, somewhere in the vicinity of 86 F. They also enjoy a brackish water environment. I would use 25 - 50% saltwater and the balance in freshwater.

A power filter is a must as these animals must have pristine water conditions. They also like a good current to play in. For additional filtration I use large corner bubble up filters filled with crushed coral. This not only helps to keep the pH up, but it develops into a portable undergravel filter.

The pH of your water should be somewhere between 7.5 and 8.0. This does not have to be an exact figure, but you must not let the aquarium get acidic. A 50% water change once a week will go a long way towards keeping your water in good condition.

I personally don't use any gravel in my *Anableps* tank. If you want to, I would recommend using at least 50% crushed coral or dolomite, this will help to keep the pH from crashing.

The tank that I keep my *Anableps* in is bare bottomed with no decorations. These animals like to thrash about, especially when adult. They could hurt themselves on anything within the aquarium. All that these animals really require is plenty of swimming room.

The type of tank that you keep these animals in is very important. A tank the size of a forty breeder is the smallest that I would keep adult *Anableps* in. The more surface area available to these animals for swimming, the happier that they will be. These animals also don't require much water depth. As a matter of fact, they seem to prefer only six or eight inches of water.

Contrary to what I have read, I don't believe that *Anableps* need a place to haul themselves out on land. Once the fish are a couple of months old they don't seem interested in coming out of the water. In the beginning I supplied dry areas for my fish. They never seemed interested in them, nor did I ever see them use them. Finally, I just removed them as they made it harder to keep the aquarium clean.

Feeding these animals presents no problems. They will eat just about anything that floats or sinks. I feed mine frozen bloodworms and brine shrimp, pellets, flakes, insects, and most important of all: freeze dried krill. The reason that I say that freeze dried krill is so important is because it is the only thing that another breeder and I have in common, and we both are getting wonderful results.

Chip and Sue Corah of Niagara Falls, NY started to get baby *Anableps* a few months before I did. Their set up was very different from mine. The only similarity that I could find was the feeding of freeze dried krill.

I've spoken to other livebearer experts that have had terrible luck with this animal. After questioning them about their care of the animal, the only difference that I could find was the lack of feeding the krill. These people all had the same problem, the animals developed a bad curvature of the spine. I believe that this resulted from a lack of something that their body needed. I believe that element is found in the krill. If you only try one thing from this article, please try the freeze dried krill, you won't be sorry.

When it comes to purchasing these animals you must be very picky. I have only seen these animals healthy in a pet store once or twice. Before purchasing them check to see that the water they are being held in is very warm and brackish. This will give you a clue as to whether the animals have been properly cared for. Upon seeing you these animals should dart about their tank wildly trying to escape. Also have the clerk feed them: a healthy *Anableps* is a hungry *Anableps*.

Upon getting your animals home, acclimate them very slowly. These fish are still babies, a two and a half inch fish is just a newborn. Try meaty foods or insects as a first food. They should be eating anything and everything in just a few days.

Now, the exciting part, breeding these fish. The first thing that you need to know is that you must be patient. It takes over two years of tender loving care before your fish are sexually mature. This means at least Twenty four months of feedings, water changes, and tank cleanings before you should even expect to see any young ones. Even at two years of age the young will probably be born dead. These fish are still too young at this point. At two and a half years things will start to improve, little ones should be present or on their way.

With this fish the smaller the broods the better. A brood of two has a much better chance of survival than a brood of five. The smaller the brood, the larger the fry. I spotted my first fry when the adults were two years old. There were five of them, all born dead and very small, about an inch and a half long. They were not fully developed, their stomachs had not closed. My second batch of fry appeared about six months later, again there were five, and again all dead with their bellies not fully closed. I started to get discouraged, but upon looking in my reference books I learned that the problem I was having was quite common for young *Anableps*.

The third batch were born about six months after the second. There were only two this time, but they were born alive! I couldn't believe their size. They were dashing madly around their parents. I had to get them out of there right away, as I didn't want the adults to crush them by accident.

I set up a twenty gal. long tank using water from the adults tank. I set it up bare bottomed with only a heater and a seasoned sponge filter. I only placed enough water in the tank to cover the heater, which was lying on its side on the bottom of the aquarium.

When I transferred the young over I sat and watched them for a while. They were very poor swimmers and seemed to shimmy. They also seemed to me to have a swim bladder problem, it looked as though they sank like little rocks when they stopped swimming. I was very worried about my new grandchildren. Even though I didn't use land portions for the adults I decided to try it for the babies. I placed a piece of slate in the water propped up by a small rock. This gave the slate a slight angle that brought one end gradually out of the water. When I backed off and let them settle down again, they went right onto the slate and rested right at the waters edge.

Now I was in a panic. According to what I had read these babies had to have live food as their first meal. Luckily I had some pin head crickets around and decided to try them. It was around four hours after they were born that they took their first meal. I fed them the live crickets twice a day for two days. On the second day I noticed them eating dead crickets. If they would eat dead crickets why wouldn't they eat other dead foods? I next tried frozen bloodworms, they loved it. Next frozen brine shrimp, it also disappeared. By the end of the week they were eating everything. flake foods included. They were the biggest pigs that I have ever seen. I also don't think that newborns require live foods, I believe that they will take anything right after birth. I'll find out with my next batch.

The little *Anableps* were very poor swimmers until they were about three weeks old. After this point I never saw them use the slate again, so I took it out. I believe that a haul out area is essential for the young and unnecessary for any fish over two months old. I theorize that the animals come into very shallow water to give birth. The shores offer shelter and plenty of food for the young. When danger threatens the young will also jump onto the mangrove roots or any other object to escape enemies. They may also utilize this behavior to capture additional prey items on the land that they otherwise would not have access to. The adults, being out in open water, don't utilize this as they have nothing around to jump onto.

My babies are now four months old and almost five inches long. They are in extremely good health. I get hours of pleasure from them. I can't wait until my next batch, which I'm expecting in a month or so.

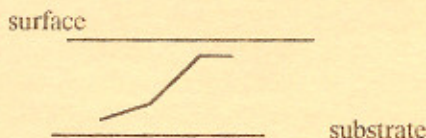
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### *Anableps Notes*

by John Mangan

I have been "playing" with *Anableps* for a number of years and have made a few observations that I would like to add to those made by Tom Neal in the previous article.

First- Tom mentions that "the mouth is turned upwards". The upper jaw of the fish does appear to be somewhat upturned but the mouth itself is actually oriented straight ahead to slightly downwards. The appearance of this fish is very deceiving. Since they live at the surface of the water, and are actually so buoyant that they have to struggle to swim downwards, it is generally assumed that they are mainly a surface feeder. They do feed off of the surface quite a bit but they also feed off of the bottom quite a bit also. Their body is uniquely shaped for this as can be seen in the stylized drawing below. The head (left and down)



and tail (right and up) are joined to the body at slight angles which give the fish the appearance of an upright type vacuum cleaner while feeding off of the bottom. This bottom feeding behavior added to the fishes natural buoyancy are among the reasons that this fish should be kept in shallow water. This is especially important for the fry, which are poor swimmers in addition to being like little corks. They have enormous appetites and will do much better if they can easily "graze" the bottom for additional food.

Next- the males gonopodium. As Tom mentions this fish has the strange trait of being able to move the base of its gonopodium to either the left or right, not both ways like most other livebearers. Also the female has a scale that partially covers her vent and allows entry only from one direction. The evolutionary reason for this is a mystery. Why make reproduction more difficult? Scientists and aquarists alike have theorized for years that there must be some way the fish can get around this "handicap". I'd like to share an observation that I have made with my *Anableps* and ask that anyone else keeping them watch their's closely to help confirm my observation. While the base of the males gonopodium only moves one way I have observed a dark colored, fleshy, extension at the tip that I have seen move freely in either direction. This may be how a male can mate even with an "incompatible" female. Even if this proves true we are still left with the mystery of why this left and right handedness developed in the first place.

Housing- the fish do need to be kept warm and in brackish water (there is a freshwater species but it is very rarely imported). One thing Tom didn't mention is that the tank should be kept well covered. There are two reasons for this: First- to prevent jumping. *Anableps* are very good jumpers. I've seen mine jump six inches straight up to try to be the first to get fed. They also will jump when frightened (more about this later). The second reason is to keep the air above the water warm and humid. These fish spend almost all of their time right at the surface, with their eyes out of the water (more about this later also). A cover will also help retain heat in the tank and make it easier to keep the water warm.

"Land"- I have made similar observations to Tom on this. The larger the fish get the less they "bask". I agree that young fish, especially newborns, must have a basking area where they can get partially out of the water. I have, however seen older fish bask also, even full grown adults, although not nearly as much as the younger fish. Not being familiar with Tom's set up I can't say this for sure, but a theory I have as to why he didn't see the older fish basking, based on behavior I've seen in my fish is- These fish have very good eyesight. Mine see me all the way across the basement and start jumping around begging for food. The times I've observed them basking are when I first come into the room and they haven't noticed me yet and after a big meal. Possibly Tom's fish were out of the water when he wasn't in the room and got back in as soon as they saw him coming. Whether this is true or not Tom's experience shows that a land area is not absolutely necessary for older *Anableps*.

Krill- My experiences seem to help confirm Tom's endorsement of krill. When I was raising my breeders (purchased as "fry") I did feed them krill as part of their diet. They grew up healthy and with straight spines. I stopped using krill when I lost my ability to purchase large containers wholesale and my fry did have problems with bent spines which got worse as they grew. After reading Tom's article, and talking with Kar! Krajniak about his *Anableps*, I've gone back to using it as part of my fish's diet. I'll have to wait and see if it makes a difference in my next batch of fry.

Purchasing- One thing I'd like to add to this subject is remember that the 3-4" fish you see offered for sale are still fry. Fry can't be sexed easily, if at all. Many years ago, when I first decided to try *Anableps* I was continually frustrated. I wanted to get a pair, but all the wholesaler ever seemed to get in were "females". These fish are often not sexable even at 6" in size. I've had some that I was sure were females turn out to be immature males. If you want to breed them get at least 6 young ones so you have good odds of ending up with at least one pair.

Fry- I'm puzzled by Tom's experience with his fry sinking "like little rocks". All of the young *Anableps* I've observed have been very buoyant. As mentioned above the fry do need a basking area and very shallow water. I have never had a problem with the adults hurting the fry if they are left together (although separating them is good insurance). It is very common to see them all swimming about in a family group. My tank is set up with two flat rock areas. One slopes gradually out of the water for basking and the other is flat and about 1-2" below the surface. This second rock give the fry and young fish a shallow area were they like to go to feel secure and get away from the adults for awhile. As to food- as they say "ignorance is bliss". Luckily I had never read that the fry must have live food at first so I didn't worry about finding any. Mine ate flake as their first food. My reasoning was that they needed something that was easy to catch since they are relatively poor swimmers.

Now I'd like to briefly discuss a couple of things Tom didn't mention. First- the location of your *Anableps* tank. Two important things to remember are that *Anableps* can be very easily frightened and that they have very good eyesight. I have found that *Anableps* will be less easily frightened by strangers (they will learn to recognize you) if their tank is in a higher location. Something coming at them from above is seen as a threat and they will panic and try to jump away. You don't want them doing this. I have lost *Anableps* from injuries received when they hit the glass hard in a panic. At the time I had their tank right inside the fishroom door. I had to go into the fishroom in the middle of the night and severely frightened them. In my new house their tank is located at the far end of

the room so they can see me coming and aren't startled. If you want to spend time watching your fish get at eye level with them. The higher the tank off of the floor the easier this will be. This is especially true if you want someone else to look at your fish. As I said above they have good eyesight and will recognize you, even across the room. You will eventually be able to look at them from above as long as you don't make any sudden moves they perceive as a threat but "strangers" can't. They are much more willing to accept approach from someone they see as being right at the water surface level.

The last thing that I'd like to mention is how they got their common name "four eyes". I don't want to go into a lot of detail on this since the purpose of this article is to teach you how to keep the fish alive not an anatomy lesson. Very simply the fish's eye is divided into two more or less separate eyes right at the water surface. This adaptation allows the fish to see both above and below the water at the same time. If you are interested in this there are many books and articles that explain it in detail.

While they were once thought to be extremely difficult to keep there are more and more success stories about *Anableps* being told. I had to learn most of what I know about them the hard way through trial and error (lots of error). While not an easy fish they can be kept and bred if you keep a few things in mind: warm, shallow, clean, brackish water; a good top; a good variety of foods; a basking area, at least for young fish; and, probably the hardest thing of all, patience. Hopefully this article, together with Tom's will make it much easier for others to keep these fascinating fish.

**Tech. Ed. Note:**

Mangan's observation of the maneuverability of the gonopodium's tip is excellent. Most observations on "one-sidedness" are based on the physical asymmetry of the fish and not on Documented Behavior! I can personally attest that male *Jenynsia* - equally one-sided - can and do breed females from either side! J.K.L.

Reprinted from *Livebearers*, Bulletin of the American Livebearer Assoc., Inc.  
For membership information contact: Tim Brady, 5 Zerbe St., Cressona, PA 17929-1513.



PROPER CARE OF GOODIEDS AND OTHER POND FISH

BY GEORGE WHITE, FVAS

I am writing this article since Goodied coveters appear to be either be too embarassed to write about their obsession or are an illiterate bunch. I do not recall ever seeing an article about Goodieds, with the exception of a National Geographic article last year on the desert ponds of Mexico which casually mentioned the presence of Goodieds in some of the pools. A beat-up old edition of Innes' book on aquarium fish which I bought 30 years ago did mention Goodieds in one sentence: "Goodieds are a fish of interest only to specialists." Enough said. A later edition of Innes' book did not even mention Goodieds.

Anyway, almost 30 years later I ran into a book by L. Chew Kang, titled "Goldfish and Other Tropical Fish," published in Kuala Lumpur, which appears to contain a picture of a Goodied. The book lists a number of live foods which it recommends for feeding fish to enhance their colors. In addition, the book contains some interesting innovative ideas for feeding fish. I will quote them below with the warning that I WOULD NOT RECOMMEND TRYING ANY OF THESE IDEAS ON ANY FISH THAT HAVE VALUE.

"Pork spleens and lungs are cheap and nutritious. Finely chopped spleens are readily eaten by goldfish and most species of tropical fish. Lungs are tough and hence not easily eaten by the fishes. However, finely minced cooked lungs are readily eaten by goldfish and most species of tropical fish."

"Poultry manure. Dry poultry manure contains left over poultry feed, undigested food together with insect eggs and larvae. These materials are readily eaten by the fishes when the manure is thrown into the pond, The manure also encourages the growth and multiplication of micro-organisms which serve as good sources of food for the fishes. It is cheap and readily available in the rural farm. However, its high nitrogen content makes it unsuitable for shallow fertile ponds, particularly during the hot season when the water level is low and the water temperature is high. At this time, excessive poultry manure may result in water pollution causing the death of the fishes."

The pictures in the book show large tropical ponds surrounded by lush growth. In one picture, the workers are netting out huge colorful goldfish. Apparently, Chew Kang's fish cultivating techniques work well. I wonder if they would work with Goodieds?

### Pork, Spleens and Lungs

Lean pork are occasionally fed to the Oscars. However, it is expensive and only a few pieces may be given to the fish on each feeding.

Pork spleens and lungs are cheap and nutritious. Finely chopped spleens are readily eaten by goldfish and most species of tropical fish. Lungs are tough and hence not easily eaten by the fishes. However, finely minced cooked lungs are readily eaten by goldfish and most species of tropical fish. Experiments by the author show that spleens and lungs may be used for commercial production of Siamese Fighting Fish in areas where tubifex worms are expensive. They may also be used as supplementary food for other species reared in ponds and in large tanks.

### Poultry Meat and Livers

The author has carried out feeding experiments with poultry meat and livers, and found that these materials are nutritious for goldfish and tropical fish reared in ponds and in large tanks. Dead chicken are readily available in rural farms. The skin together with the feathers, internal organs and the fat of the birds should be removed. The livers can then be finely minced and fed to the fishes. The meat may also be finely minced and fed to the fishes. But this is a tedious process because the meat is tough and it is difficult to remove the bones. Therefore, it is best to cook the meat, mince it and then feed it to the fishes. Both poultry livers and poultry meat serve as good sources of proteins for the fishes. They may also be used for commercial production of Siamese Fighting Fish.

### Poultry Manure

Dry poultry manure contains left over poultry feed, undigested food together with insect eggs and larvae. These materials are readily eaten by the fishes when the manure is thrown into the pond. The manure also encourages the growth and multiplication of micro-

organisms which serve as good sources of food for the fishes. It is cheap and readily available in the rural farm. However, its high nitrogen content makes it unsuitable for shallow fertile ponds, particularly during the hot season when the water level is low and the water temperature is high. At this time, excessive poultry manure may result in water pollution causing the death of the fishes.

### Poultry Feed

Poultry feed contains 18% to 20% proteins, 6% to 8% fibres, 3% to 4% fats together with vitamins and minerals specially formulated for rapid growth of the birds. This is a very useful food for large scale production of goldfish, carps, and most species of tropical fish reared in ponds and in large tanks. Limited amount of this material may also be used as a supplementary food for fishes kept in the aquarium. Small pellets used for young chicks are more suitable for goldfish, carps and other larger species while fine mixture should be used for the Guppies, Gouramis, Swordtails, Cichlids, Tiger Barbs and other smaller species. Large grains of maize present in poultry feed are usually not eaten by the fishes. Hence, only mixture with minimum content of this material should be used in the fish farm. If a good quality mixture is readily eaten by the fishes, do not change to other brand, because the fishes may take some time to get used to the new mixture. Only fresh poultry feed should be fed to fishes.



Platies in pond feeding on poultry feed

## Breeder's Award Program

### BAP Checkers:

Annandale/Falls Church area: Jeff Burke (703) 941-3230  
Montgomery County: Ray Hughes (301) 424- 3531  
Mt. Vernon/Olde Town area: Gene Moy (703) 765- 0865  
Oakton/Vienna area: Rick Mckay (703) 281- 1647  
Occoquan/Lake Ridge area: John Mangan (703) 491-4980  
Prince George's County: Lorne E. Williams (301) 505-2917  
Springfield/Franconia area: Pete Thrift (703) 971-0594  
Warrenton/Manassas area: Gerry Hoffman (540) 347-7486

We still could use some more checkers. There are a number of areas where we don't have anyone. Even if there is someone already listed for your area we could always use someone else to help spread the work around.

### BAP Standings:

Breeders Award \*  
Intermediate Breeder \*\*  
Advanced Breeder\*\*\*  
Master Breeder\*\*\*\*  
Grand Master Breeder\*\*\*\*\*

Jeffrey Burke 335\*\*\*  
John Mangan 155\*\*  
Don Kinyon 105\*  
Lorne Williams 50\*  
Gene Moy 30  
Gerry Hoffman 10 +



I am beginning to work on updating the BAP rules. It's been a long time since they have received a good revision. I'd like to ask everyone to look over the current rules (printed in the Jan/Feb issue. I'll bring copies to the next several meetings for anyone that doesn't have one) and let me know of anything you think should be changed. The BAP committee will then discuss the proposed changes and up to date rules will hopefully be published in the Jan/Feb 1997 issue of Delta Tale.

## Vern Parish Fund

Vern Parish, Fellow of the American Livebearer Association, passed away March 13, 1996. Vern spent his lifetime in the care, propagation, education, maintenance and preservation of aquarium fish. He held an extra special interest in livebearing fish. As his wife Jean commented at their Golden Wedding Anniversary, Vern had fish when they first met and when they married "the fish came along with the man". Vern is remembered as a kind, gentle, generous man who always had time to talk fish with everyone regardless of their level of experience or knowledge. Written tributes to Vern are in issue 141 of LIVEBEARERS.

In this spirit, the American Livebearer Association has established an endowment fund known simply as the **Vern Parish Fund** to support education in the field of livebearing fish. The ALA is actively soliciting and accepting donations to this fund. This fund will be maintained independent from the ALA general treasury in a separate high interest bearing account. Once a sufficient level of money has been accumulated, the ALA will draw on the interest of this fund and provide cash grants to graduate level research students actively engaged in the study of livebearing fish. The amount and recipient of these stipends will be determined by the Board of Directors of the ALA.

Pat Hartman and Jim Langhammer have been appointed as Co-Chairmen of the Vern Parish Fund. Pat will lead the pursuit of contributions and publicity while Jim will maintain the actual account and provide contacts with the academic community. Please feel free to contact either of us if you need any additional information.

All checks should be made payable to the American Livebearer Association and sent directly to Jim Langhammer at the address listed below. Thank you.

Pat Hartman  
12852 So. 18th Street  
Vicksburg, MI 49097

Jim Langhammer  
2101 N. Vermont  
Royal Oak, MI 48073

616 649-2949

810 541-3292

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Contribution to the **Vern Parish Fund**:  
(please make checks payable to the American Livebearer Association)

donor \_\_\_\_\_

amount \_\_\_\_\_

date \_\_\_\_\_

# POTOMAC VALLEY AQUARIUM SOCIETY

PO BOX 664, Merrifield, VA 22116

## Application for Membership

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Street: \_\_\_\_\_ Apt. \_\_\_\_\_

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

Telephone: \_\_\_\_\_

Optional information:

Occupation: \_\_\_\_\_

Where did you here about PVAS/get this application? \_\_\_\_\_

Number of aquariums: \_\_\_\_\_ Time in the hobby: \_\_\_\_\_

Special interests: (e.g., catfish, cichlids, etc.) \_\_\_\_\_

Reason for joining: \_\_\_\_\_

Membership dues for PVAS are

Individual/Family: \$12/yr

Corresponding: \$ 9/yr

Junior (under 18) \$ 5/yr

Please send application and check to the address above.

## SUPPORTING SHOPS

### ANNANDALE PET SHOP

7406 Little River Trnpk.  
Annandale, VA 22031  
256-2400

### AQUATIC ENHANCEMENT

PO Box 22677  
Alexandria, VA 22304  
765-4620

### CREATURES 'N CRITTERS

9575 Braddock Rd.  
Fairfax, Va  
978-0745

### DISCOUNT PET CENTER

9028 Mathis Ave.  
Manassas, VA 22110  
361-7769

### NATIONAL PET & AQUARIUM

6168 Arlington Blvd.  
Falls Church, VA 22046  
533-7828

### OAKTON PET SHOP

Rt. 123 & Hunter Mill Rd.  
Oakton, VA 22124  
281-9622

### PET MART-TYSONS

8417 Old Courthouse Rd  
Vienna, VA 22180  
281-8181

## VIRGINIA

### PETS ETC-HERNDON

462 Eiden St.  
Herndon, VA 22171  
437-9667

### CUSTOM AQUARIUM CONCEPTS

293 Sunset Park Drive  
Herndon, VA 22094  
(703) 689-2815

## SUPPORTING SHOPS

### ANIMAL EXCHANGE

765-A Rockville Pike  
Rockville, MD 20852  
424-PETS

### AQUARIUM CENTER

Liberty Rd. at Offutt Rd.  
Randlestown, MD  
521-4529

### BROTHER'S PETS

13810 Georgia Ave.  
Aspen Hill, MD 20906  
460-4600

### CONGRESSIONAL AQUARIUM

162 Congressional Ln  
Rockville, MD 20852  
881-6182

### DISCOUNT PET SUPER- MARKET

1321 A&B Rockville Pike  
Rockville, MD 20852  
309-9110

### FISH FACTORY AQUARIUM

582 N. Frederick Ave.  
Gaithersburg, MD 20877  
977-7500

### HOUSE OF TROPICALS

7389F Baltimore-Annapolis Blvd  
Glen Burnie, MD 21061  
761-1113

### MARINE CARE SPECIALISTS

16065 N. Frederick Rd.  
Rockville, MD 20855  
330-0720

## MARYLAND

### MARYLAND TROPICALS

13884 Old Columbia Pike  
Silver Spring, MD 20904  
879-0200

### MONTGOMERY TROPICALS

7845-G Airpark Rd.  
Gaithersburg, MD 20879  
670-0886

### RICK'S FISH & PET SUPPLY

1003J West Patrick St.  
Frederick, MD 21702  
694-9664 831-4747

### SHOWCASE AQUARIUM

11248-11250 Triangle Ln  
Wheaton, MD 20902  
942-6464

### TOTALLY FISH

14332 Layhill Rd.  
Silver Spring, MD 20906  
598-2229

### TROPICAL FISH WORLD

16529 S. Frederick Center  
Gaithersburg, MD 20877  
921-0000

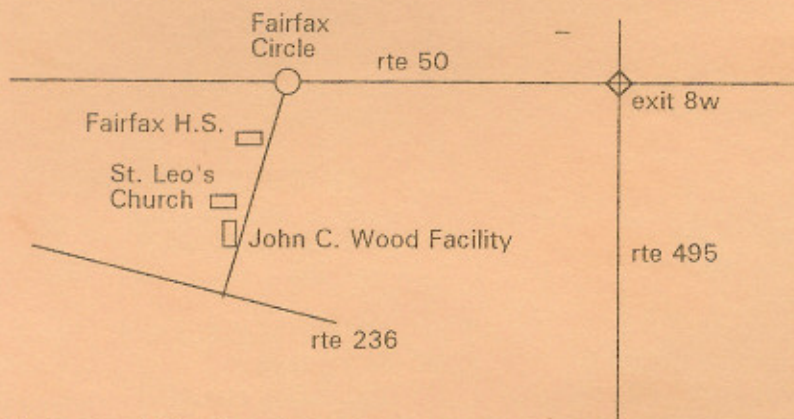
### TROPICAL LAGOON

9439 Georgia Ave.  
Silver Spring, MD 20910  
585-6562

### AQUATIC CREATIONS LTD

2909 Urbana Pike  
Jjamspille, MD 21754  
(301) 831-8200

Potomac Valley Aquarium Society  
PO Box 664  
Merrifield, VA 22116



Meetings are held at the John C. Wood Facility, 3730 Old Lee Hgwy. (rte 237), Fairfax City, VA. Room 7 (in the rear of the building). Doors open at 7:30, meetings start at 8:00. Everyone is welcome.