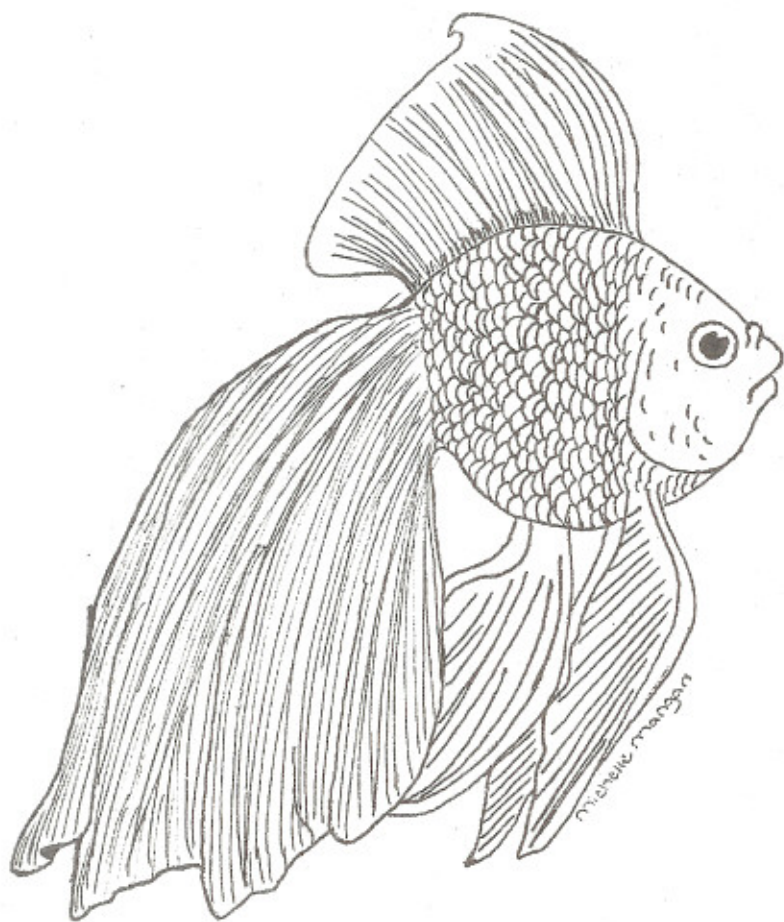


* DELTA TALE *

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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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<u>Bowl Shows</u>	Alex Townsend
<u>Programs</u>	
<u>Ways & Means</u>	Pete Thrift
<u><i>Delta Tale</i></u>	John Mangan

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Frum the editor's desk

The PVAS elections took place at the Nov. meeting and we were lucky enough to finally get some new people involved. The complete list of new officers for 1997 is:

President- Pete Thrift

Vice President- Rick McKay

Treasurer- Dave Snell

Corresponding Secretary- Alex Townsend

Recording Secretary- Val Spring

New Board Members- Lorne Williams, and Barbara McClorey*

also- Kenny Warren, and Ray Hughes will be serving the second years of their terms on the board. *I think I've spelled Barbara's name wrong. If I did I apologize.

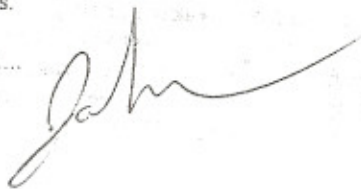
If you didn't get an office and still want to do something we could probably use some new committee heads. I'm sure Pete wouldn't mind getting rid of ways & means now that he is President and some of the other committee heads probably wouldn't mind help or replacements either (anyone out there interested in journalism? hint, hint).

Our Fall Auction and Work shop was another success. A great, and informative, time was had by everyone that attended the workshop. I'd like to thank all of our speakers: Peter Thode, Bob Goldstein, Rusty Wessel, Chris Andrews, Jim Karanikas, and Ray "Kingfish" Lucas. The auction was a big success, as usual, Delta Tale's financial reporter estimates that "we made about a zillion dollars, give or take a bunch."


Reminder- the December meeting is our special "Holiday" meeting. Instead of a regular meeting we will be having a pot luck type dinner. PVAS will supply a main course or two and everyone else is asked to bring some type of side dish or desert. You are encouraged to bring family or a guest. In addition to the dinner we traditionally have a gift exchange also- bring a small, wrapped, fish related, gift and receive one in return. The 1996 BAP awards will also be presented- so if you have any outstanding forms get them in quick (see BAP page). Please note- the meeting will start an hour earlier than normal, ie 7:00pm.

Happy Holidays.

Until next time...



WHAT'S HAPPENING!

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

- Nov. 28:** Thanksgiving. Time to remember those less fortunate than you- donate food, time, money, or whatever you can. Try not to make it just a day when everyone eats like a pig and sits around watching parades and football on television.
- 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.
- Dec. 25:** The day that jolly fat man comes to visit (and I don't mean Jerry Garcia- he's busy touring 7 - 11's with Elvis).
- Dec. 26:** National gift return day. Here's your chance to get rid of all those clothes in your closet that are too small or ugly to wear. Just take them to a store and tell them you want to exchange them but you don't have a receipt because they were a gift. Trust me it works. Last year I got rid of a pair of paisley bell bottoms and a Nehru jacket. With my luck they'll come back into style now.
- Jan. 1:** Time to make New Year's resolutions.
- Jan. 2:** Time to break New Year's resolutions.
- Jan. 13:** PVAS Monthly Meeting. The Nov. speaker was so good we asked him to come back (and actually show up this time). John Mangan will be giving a program on "Introduction to fish breeding". It will cover a wide range of fishes- common to rare, easy to difficult. Bring your problems and questions, audience participation will be encouraged. Also all of the usual stuff: bowl show, raffle, door prize, refreshments, mini-auction, and more.
- Feb. 10:** PVAS Monthly Meeting. Program, bowl show, raffle, door prize, refreshments, mini-auction, etc. etc.

Lamprologus leleupi

by Lorne E. Williams, PVAS

I decided to attempt to spawn *L. leleupi* after I saw how beautiful they were in a magazine I was reading. I acquired four from a member of PVAS. He tried to pick out two pairs and was successful as both pairs have spawned.

When I received them they were a beige color. I used medium size white gravel and fed lots of frozen foods and OSI color food. They colored up to a nice orange color.

They are very aggressive with their own species and one pair was always hovering at the top of the aquarium until I removed them to another aquarium. I keep one pair in a species tank (alone) and the other pair in a Tanganyikan community tank. Only the pair in the species tank has been able to successfully raise their fry. In the community tank the fry venture into other fishes territories and are eaten.

L. leleupi are cave spawners. They do well spawning in barnacles but I used a ceramic log ornament that was placed so light could not get into the log. When the pair spawned the female stayed in the log until the fry became free swimming. The male seemed to be interested only in the defense of the tank and not the care of the eggs.

They require hard, alkaline water as do most rift lake cichlids. I added one tablespoon of marine salts and one tablespoon of Epsom salts per five gallons of water to achieve a pH of 8.4. I was not able to test my hardness. They do not appreciate large water changes and the pair bond broke up several times before I realized what was causing them to fight. I had to be careful not to overfeed and remove any uneaten food. I used a sponge filter and turned off the power filter after getting fry sucked up into it.

The breeding pair were left with the fry until they were about five months old because I didn't have anywhere to put them. I fed the fry baby brine shrimp, microworms, and powdered OSI color flakes. During this time the pair spawned several times but the fry were eaten by their older siblings.

L. leleupi is an excellent species to raise but you should remember they are slow growing and reach breeding age at around 18 months.

ed. note: *Neolamprologus leleupi* is currently considered the correct name for this fish although most hobbyists, myself included, still tend to refer to them as *Lamprologus*.

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) 630-7674
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 +

It's been a pretty good year for BAP participation. A number of people will be receiving BAP certificates at the Dec. meeting/Christmas Party. If anyone has any outstanding forms make sure I receive them by Dec. 7 if you need the points to receive a certificate. To make sure I've received your paperwork, or if this issue gets to you too late to mail it, call me. Leave a message and I'll get back to you ASAP.

Last chance for input on BAP rule changes. If you have any suggestions on updating the BAP rules get them to me by the end of Dec. The current rules are in the Jan/Feb issue. If you need a copy I'll have some at the Dec. meeting. I'd really like some input from the membership on this and have received none so far.

Exploring the Rio Negro and Rio Dimini, Brazil

By Todd C. Wenzel

Sept. 29/30, Sun/Mon

The Varig flight to Manaus had the Faucett flight to Peru beat all over. We departed about 45 minutes late rather than 7 hours! The food and service were terrific, almost that of US first class seating. You received a three-language menu with color drawings of Brazilian birds on it and the napkins were cloth, complete with a little button-hole in the corner. Dee got to see her first in-flight movie, "True Colors" (free, not \$3.00 like US carriers) and it was the first time either of us had been on a DC-10. Those planes are huge, seating 9-across and a good forward pass long.

Clearing customs was slow but painless. At 2 am, we were all too tired to be nervous. Our host, 43 year old Dr. Ning Labbish Chao (Labbish) was waiting and in short order we were in our rooms at a simple but clean hotel.

The next morning, Labbish's bus wasn't scheduled to arrive until eleven so some of the group went to the fish market and found huge silver dollars, large tiger-shovelnose cats and other assorted fishes. They also found a small pet shop with some rather odd mixes like Discus with Black Moor goldfish. They did see some *Poeciliocharax weitzmani* (Characoids). We'll have to get some when we return. My group, however, took a wrong turn and just worked (walked) up a real good sweat.

That afternoon, Monday, we boarded the "Bumerang" which took us to the "meeting of the waters". This is where the Rio Negro converges with the Rio Solimoes (Amazon). It's like black coffee (R. Negro) meeting the coffee with cream & sugar (Amazon) and the junction is very sharply defined. Pink and gray dolphin cruise this area to feed on fish that are stunned by the sudden change in water chemistry. The R. Negro is pH 4.5-5, very low conductivity, the Amazon is pH 7-7.5, moderate conductivity. Just to clarify things, what we know as the "Amazon" is called the Solimoes from Manaus upstream and the Amazonas below Manaus, once it has been joined by the Rio Negro.

Lunch was at a floating "restaurant" near Manaus where we met the Iguana, our home boat for the next 2 weeks and its captain, Miguel. We dined on rice, salad and about a 15 pound tambaqui (Pacu). There's another fish that'll make me salivate when I visit a fish store. Pacus are a major food fish here and taste excellent.

After lunch we were delayed awaiting a generator part, so out came the fishing and collecting gear. We could see *Cichlasoma* (*Heros*) *severum*, *C. festivum* and a flagtail *Prochilodus* with each group of four to seven *festivum*. Hook and line brought in the *festivum*, white and rhombus piranha and small *Calophysus* catfish. Dee was so proud, holding up the 3" rhombus piranha she'd caught. Scott Dowd (Boston) and Jim Carmark (Calif.) swam over to shore and seined up more *festivum*, some small black-tailed characins and a *Geophagus*, probably *acuticeps*.

Looks like a pretty good bunch - 11 people, 4 women, all but Dee and one other girl had been to South America previously. Dr. Chao seems to be pretty nice, too, no where near as hyper as the Ph.D's I normally work with. He really seems out of place

here. Labbish is a Taiwanese born, US educated individual who was offered a job here in Manaus at the university and is now a naturalized Brazilian citizen.

After supper we all sat on the upper deck of the Iguana and drank Skol Brazilian beer. Skol isn't as good as the Pilsen or Crystal I'd had in Peru but it'll do. Dee and I turned in early, about 9pm. "Its been a long day."

Oct 1st, Tuesday

We spent all last night traveling and are still on our way up the Rio Negro to Barcelos. For breakfast we had fried plantain covered with cinnamon & sugar, cheese, bread and fresh pineapple. Not quite my Coke and Microwaved burritos, but the exotic flavors mixed with the Rio Negro scenery were exciting to all of us.

After breakfast, I gave Labbish (Dr. Chao) the books I'd brought for him. They were paid for by the Raleigh Aquarium Society and Fish Pros aquarium shop gave me a break on the price. For \$50, I was able to donate over a hundred dollars worth of books to the "library". In most countries that are any good for collecting, books are very expensive or difficult to come by so I always try to donate a few to appropriate individuals or organizations. As it turned out, Labbish loved the books, especially the Baensch Atlas. Even though he had a respectable library, he had none of the books I had given him.

1:30 pm - Labbish says we're going straight through to Barcelos rather than stopping to collect. The scenery has been interesting. Birds: blue, and black kingfishers, herons of white blue or gray; big green parrots and several different toucans. I saw the toucans about 5:30 am when no one but Miguel and I were awake. Unless I've been partying, it's usually impossible for me to sleep much past sunrise during these trips, I might miss something! Also saw two 18" iguana on the river bank. We saw large and small orchids, one was about 3 or 4 feet in diameter, growing in the crotch of a huge tree. Since the water was fairly high, we didn't see many holes in the banks from the bodo', plecostomus catfish. These "pleco-condo's" were everywhere during my trip to Peru in the dry season.

Note: On the boat and in the hotel, the toilet paper disposal was rather unusual. They allow you to flush the "human" waste and then put the paper in the waste basket. A paradoxical habit in this normally non-ecological region. The only thing we could think of was that sewage systems couldn't handle the crude quality of the TP.

Change one, we're finally stopping to collect. A local guide took us back into a small cocha. A cocha is a small lake, connected to the main channel during the wet months but isolated when waters recede. Labbish was amazed when he saw how we reacted. Usually, he has to get wet to get his students to follow. In our case, it was like the Sioux charging Custer! We ran right past Dr. Chao and started beating the water to a froth with our nets. We'd been in country nearly two whole days and hadn't collected a thing yet. To say we were all a bit anxious would've been quite an understatement.

The habitat was tea colored water to about 2 1/2 feet deep. The bottom was a layer of undecayed leaves over a firm mud substrate. We caught a wide variety of fishes including *Biotoecus opercularis* and *Apistogramma* cichlids and two species of *Trichomycterid* (parasitic) catfish. Although the diversity was good, the only plentiful species was *pirrhulina*, the splash tetra. For those of you afraid of being eaten in such an area, Jeff Cardwell was heard to say, "Hey, there's two piranha swimming past me over

here". There goes another Hollywood myth. The fisherman also had a nice catch (for food). He'd netted or hooked some large Leporinus, black piranha, 6" silver dollars, Tucunare' (*C. ocellaris*), severum and a beautiful pike cichlid.

Time's up! Back to the boat to continue upriver. The beer and fish stories flowed, celebrating our initial success.

Oct. 2nd, Wednesday

We stopped early this morning about 30Km downstream of Barcelos to pick up another guide. I saw something near shore so Jim and I jumped in and seined up some beautiful little pike cichlids (*Crenicichla lepidota*), some 1" *Macrobrachium* shrimp, an *Elachocharax georgiae*, a *Characidium*, one transparent tetra (*Asiphonichthys condei*) and a "lamp-eye" killifish. This is neat, the only place I've ever seen most of these fish in photos.

Note: The "*Characidium*" turned out to be a goby- *Microphilypnus* sp. (*Eleotridae*) and the "killie" was actually *Fluviphilax pygmaeus*, the only non-livebearing member of the *Poeciliids*. This isn't like the pet shops, none of the fish have labels!

We continued on after the guide was on board and finally entered the Rio Dimini at 6:30pm Wednesday evening. We ate tucunare (*Cichla tamensis*) for supper and everyone turned in early while Miguel piloted the Iguana through the darkness. By 2 or 3am we'd finally reached Sama Uma, the village that would be our start point for the canoe trip to Dr. Chao's research site.

Oct. 3th, Thursday

Thursday morning we packed the collecting gear and provisions into half a dozen canoes of various sizes and headed up igarape do rainha (Queen's creek). This trip normally takes about six hours. Since we had two very large (15 & 18 feet) canoes, it took a full 7 1/2 hours.

This was NOT fun! Dee and I and young Pedro got a small canoe. In large canoes, some can rest while others paddle. Yet the big canoes aren't maneuverable and get hung up easily on the dead-fallen trees. Our little canoe slipped over, under around or through the maze of limbs and branches but it meant that I was paddling (or pushing) upstream the entire 7 1/2 hours! For the first 2 hours it was an adventure. After that it became a real bitch. I won't forget to keep a water jug again either.

Along the way, we saw the brilliant blue morpho and other butterflies and some 3 1/2" black and yellow caterpillars. The folks on the big boats dipped up some checkerboard cichlids and *Acestridium* discus catfish while waiting for trees to be cut out of the way. These cats look like a one inch long farlowella and were on the undersides of submerged grasses. I later found that these cute dwarfs were full grown! Looking down through the clear water, not yet stained like the main channel, I saw a 10 inch diameter stingray amble along the bottom, four feet below. We also witnessed several foot long tucunare and striped leporinus chasing after smaller fish moving way to fast to ID. Looking back, the trip in was amazing, you'd never believe any of this water was navigable with the maze of obstructions that we went through.

We finally pulled into camp about 5:30pm. Actually, we flew right by the camp site because Pedro didn't recognize it at first. Fortunately, Queen's lake was just 50 yards further up and we got turned around and came back in time to meet the rest.

After being treated to an energy snack of goiabada (guava "jello"), we grabbed our nets and hit the water while the guides unloaded the canoes. Cardinals! Little schools of 5-20 were all over the place. Now I'm not going to spend much time catching fish I can buy for less than \$2.00 back in North Carolina so I concentrated on "other" fish. In addition to *Hyphessobrycon heterhabdus* (flag tetras) and other nondescript tetras, there were bunches of fat little marthae hatchetfish, 2 Apisto. species (hyppolyte & paucisquamus), filamentosa checkerboards, several 1-2" Gymnotid knife-fish and a weird little 3/4" catfish that no one recognized.

When dinner came, I think we would've eaten old shoes if it were offered. We had worked our butts off and hadn't even stopped for lunch. What did we eat? Fish, of course! Piranha and Hoplias, cooked low over the fire. I thought the smoky flavored Hoplias meat was excellent though Dee was less impressed. As for the Piranha, I've yet to taste one that I considered "good". By the way, did you know that a seven pound wolffish (Hoplias) will feed 18 people, with leftovers?

After dinner (and after dark) we took a "night walk" in the jungle. Dave Schleser kept finding curious things to show us... while we kept getting bitten by army ants. As we walked, Dave pointed out an Amblyopigid (false scorpion) about 3" diameter, a jungle centipede, and various spiders including a red-bodied Tarantula. We also finally located the main "convoy" of army ants. It would've been funny if it hadn't hurt so much. Dave, who'd been bitten several times himself, merely took a few steps forward and started explaining that if the ants were traveling in one direction they're bivouacking, if both directions they're raiding. All this time Jeff Cardwell, my roommate in Peru ('88), was standing right on the ant's pathway and having his screams of pain ignored by "nature Dave". Jeff's video of the event caught Dee saying "Ow, Ow, something's biting me"! And me saying matter of factly, "Yeah, they got me too". Poor Dee, first she's worn slam out, followed by a not quite four star meal and then she's eaten by army ants. I don't think she likes this "jungle" stuff.

That night was the first time many of us had ever slept in hammocks. After what we'd been through, I don't think it mattered much... We dozed off to the call of a little frog that sounded like someone's microwave going off, "Beep, beep, beep, beep, beeeeeep!"

Somewhere in the middle of the night I heard a distant troop of holler monkeys. It reminded of the jungle warfare school in Panama, training that made me feel really comfortable here. It's hard to believe I'm this far out in the middle of nowhere. This place is GREAT!

Oct. 4th, Friday

I was back in the water before breakfast. It's only slightly tinted here. Since no one else was out and about, I was able to take my time. Take a step, look, take another step, look some more. I watched the cardinals schooling by. What color! Of course the "plain" tetras and fat little marbled hatchetfish were there too. But the best part was watching the checkerboard cichlids (*C. filamentosa*). Singles and pairs picked at the

bottom around what appeared to be their chosen territory. I'd watch for about a minute and then move my dip net in slowly. Their comfort distance was 4-6" so I got as close as that and swung the net. Oops, bent the net handle, but I got the fish. Twenty minutes later I had three *Crenicara*, two jumbo cardinals and two different species of *Apisto*'s. Unfortunately, when I brought them into camp I found that the tub I'd put last night's collection in had had formalin in it. Scratch one night's efforts.

About mid-morning, four of us headed out to Queen's lake to see what we could find. The lake is probably 20-30 acres and is presently 2-4' deep except for the "Y" shaped channel. This is formed by the meeting of two jungle streams, created during the dry season. The channel depth is 4-8' and the outstanding clarity here made fish watching a pleasure. These fish haven't seen "man" and weren't spooked by our presence. We watched *Uaru* pairs, giant severum, *Cichla tamensis* and the undescribed green piranha that's endemic to the lake. Later, we fished the channel using artificial and live bait. Nothing was interested in the artificials, probably because you could see they weren't "real" from 20' away. It was quite a different story using marble hatchets and flag tetras (*H. heterhabdus*) as bait. Everything nailed them. We caught green piranha, dogfish (*Acestrorhynchus* sp.) and tucunare (*Cichla* sp.). It took a while but we even caught fish small enough to try to bring back, a 3" piranha and two 8" peacock bass.

The remainder of the lake was a green expanse of cabomba and sparse reeds, coated with filamentous algae. When we pushed into these areas with our canoe, hydrogen sulfide bubbles rose from the bottom. This may have accounted for the interesting behavior by the lake's *Apisto* population, *A. hippolyte* and *A. paucisquamus*. They had developed an escape tactic more typical of Kilifish such as *Rivulus* spp. Reasoning that if you aren't IN the water with the fish that's chasing you, it's hard for him to eat you! These *Apisto*'s simply jumped out of the water and onto mats of damp reeds or cabomba. Using this knowledge, we just stirred up the bottom and scooped up the fish as they flopped on the weeds.

The shallow areas also held a "green-line" pencilfish that I hadn't seen before and small (3/8" to 1") lampeyes (*Fluviolax* sp.). These lampeyes weren't as pretty as the one I'd caught south of Barcelos but they were interesting, nonetheless. They are the only non-livebearing member of the family *Poeciliidae*, to which guppies and mollies belong. An oddity like this gets high marks on my hit list. We also saw the first rummy-nosed tetras of the trip as well as a beautiful red-tailed tetra whose rear third was "cardinal" red! Regretfully, we didn't catch any rummy-nose and the red-tails were all caught in Labbish's traps and pickled.

This seems like a good place to mention the water chemistry at our scenic retreat. Queen's lake had a temperature of 28C (82F). The Ph varied from 4.3 to 4.6. Dissolved oxygen was low at 3.8ppm. And the lake was clear and very lightly brown tinted with a fairly low conductivity of 9-10 microseimens (us). The creek was pretty much the same with the exceptions of DO (6-7ppm) and an even lower conductivity (5-6 us).

Also, I'd like to comment on the insects. Compared to Peru, this place is great! I'd read that the Rio Negro water was so nutrient poor that it wouldn't support much aquatic insect life but I also know what happens if you believe every thing you read. However, I was pleasantly surprised that the mosquitoes and biting flies were so light that you don't need ANY insect repellent. By comparison, there were nights in Peru that we

had to go up on the roof of the MV Margarita to eat supper. We had to get out of the lights so we wouldn't ingest too much extra "protein" with our meal, yuck!

All that fresh air made for a pretty quiet Friday night. Scott Dowd caught a 4" beetle and when he went to show Jeff, it latched onto Jeff's hammock. They spent 15 very noisy minutes (at 11pm) before they got it free. A dousing with Aguardente (cane liquor) finally made it let go. The best camp quote came from Sharon, talking about life at home, "Aw, my cat puked again... Oh my God, it's my snowflake moray eel!". Ah, the things that go on during these trips, you never know what's going to happen next.

Saturday, Oct. 5th

I went out with guide, Manuel, to check the fish traps this morning. Labbish said I should take my camera and get some good pictures. I got the photo's all right, but I was worried sick about my Nikon (and myself) the whole time. You know those tiny little dugout canoes that are just high enough that they don't take on water? Put a 98 pound Brazilian and an American into one of those wee unstable vessels and you can only begin to imagine my concern.

The traps were constructed of green window screen and about two feet tall. They had the outline of a horseshoe with the entry point at the open end of the shoe where the seems came together. Baited with dead fish and placed near shore, they could sample the entire water column and when you were finished with them, they collapsed for transport. The traps contained mainly cardinal tetras but included a smattering of other small fishes. The one major exception was a presumed pair of what we know as "striped rafael" catfish, 10 and 12 inches long! Their bellies were bulging and it was obvious they'd eaten the bait and all the hapless fishes that had found the trap before they did. Those rafael's would eventually become residents at Dr. Chao's home back in Manaus.

The crew broke camp at noon and headed back to the Iguana. The return trip was much nicer... and faster as we were now going downstream! Pedro, Dee and I were in a small aluminum canoe and made real good time. We could zip through snags and slide through zig-zags that the bigger boats spent much longer negotiating. I could tell Dee was happy, she was finally observing and commenting about the many sights around her. I was a little happy myself, not that our male guides were bad cooks, it's just that the girls on the Iguana were that good. I guess there really are some things women naturally do better... Just kidding ladies, lighten up! We even noticed these small brown birds flying over the creek. Oops, on closer examination... brown bats. They hugged the underside of dead falls to rest and took off whenever our canoe came too close.

In our haste to see the Iguana again, I missed an opportunity that my cohorts were able to take advantage of. During the trip back from Queen's lake, the larger boats suffered numerous delays at the many obstacles. Being dedicated fish nuts, dip nets hit the water to snare still more Acestridium discus cats. On the underside of submerged vegetation, they caught enough of these miniature Farlowella-like catfish to make sure all of us had some to take home. In these habitats you never know what you'll catch, or where. So try everything once!

The three of us made it back without losing a single fish. We unpacked, showered, drank a beer... and still no one else had arrived. Our 7 1/2 hour trip up to the lake had

only taken 3 1/2 hours on the return, an hour less than the others. Only George the guide beat us back.

Boy did we party that night. The beer we'd taken to the camp was gone after the first day so some of us had been forced to live on food and water for two whole days! Labbish (Dr. Chao) broke out a couple of bottles of Aquardente cane liquor so that those hardier soles would have something to drink. And Dona Estella celebrated our return by fixing a special homecoming meal of Paca, an aquatic rodent slightly smaller than a capybara with the coat pattern of a fawn deer. That was the best rat I've ever eaten!

Sun. Oct. 6th

On Sunday, we traveled back to Barcelos and planned to have lunch at a little restaurant in town. The tropical fish exporter's boat was at the dock so we treated his representative to a very tasty meal of river turtle and got a tour of his boat, loaded with fish trays. About 90% of the trays held cardinals, 1000 per tray for small fish, 400 per for large. We estimated that there were almost 1 1/2 million tetras on board this one boat by the time it left, which is why I agree with Dr. Chao that "official" cardinal export figures of 12-14 million are probably far too low. The native collectors receive about \$3.00 per 1000 cardinals in mixed-size trays and a bit more for all large fish. There's approximately a 1000% increase in price at each level before those cardinal tetras reach their final destination in tanks across the US.

Dee and I took a walk with Carolyn and Scott to where a local was offering a couple of boas and a baby jaguar for sale. No one was interested in the snakes but the jaguar cub would've been fun if it had been in good health. Only \$50... and several years if you got caught bringing it back! We also picked up some goiabada, the guava fruit paste, for an interesting "refreshment" at our next Raleigh or Durham aquarium society meetings back home.

We saw other sights of interest in Barcelos as well. There were the pet macaw parrots, strolling in their owners yards. We visited the local church school, complete with hopscotch game drawn in chalk on the cement. Noticed Barcelos' other major export, bundles of broom straw, destined for Manaus. And finally, we kept seeing these wooden boxes at the curb with "LIXO" written on them. Later when I asked Mario what lixo meant he was puzzled. I spelled out the letters on a napkin and he smiled and said "leeshow", the "x" in Portuguese is pronounced "sh". Without knowing it, I'd been observing that this town in the middle of the jungle had curbside trash pickup! What a country.

Sunday evening we motored downstream to a beach where the sand would actually suck your feet under due to the water moving through it. That was a weird feeling! No one in Labbish's crew ever samples at night because of the stingrays, snakes and caiman. Ha! Do you think that's going to stop the "Gringos Doidos"? No sir!

Our seining turned up hundreds of tetras, a foot long whiptail catfish, a pair of 8" *Geophagus surinamensis*, *Biotodoma* cf. *wavereinei* and small white doradid catfish that looked like albino *Corys* with big eyes. The guides hand-netted an unusual *Disceus* sp. freshwater stingray and later Jeff and I added another *G. surinamensis*, a freshwater drum, a black piranha small enough to be cute, a *Prochilodus* sp. and more of those white doradids by cast-netting.

The ray and the large *Geophagus* died, but not before we found that the one Jeff and I caught had about 200 fry in her mouth - still alive! The adults were brilliantly striped in green and red and it was a shame they didn't make it but at least we'd have the young to bring back.

Monday Oct. 7th

During the night we moved to Labbish's next study site. His students, Mario and Saul, left early to set the scientific gill nets and traps. The rest of us relaxed and fished. Scott caught the "sardine from hell", a skinny 4 inch fish with 3/8 inch needle-sharp teeth. It became excellent bait for some really nice sized (14") black piranha.

Sitting still as we were, the boat got quite warm once the sun got high. No problem, on go the shorts and swim suits and over you go! Yes, I did watch Scott and Carolyn a while before joining them. I did NOT want to have trouble while swimming in 8 foot deep water where we'd just caught lots of things with big teeth. Either the weather is getting very warm or Dee is becoming exceptionally brave, even she jumped in.

About mid-morning we took a large canoe and headed off to collect two flooded forest locations. We caught tons of *Apisto. pertensis* and as always, lots of ugly tetras. With Manuel's help, we also caught more *crenicara filamentosa*, *Biotoecus opercularis*, *lampeyes*, *Copella nattereri* and some 3/8 inch *Agamixis*-like catfish. Here we finally caught *Apisto. agassizi*, one of my favorite dwarf cichlids.

(note: Lee Finley later identified the 3/8" cats as being full grown *Scoloplax* sp. Imagine that, fully mature fish at that size!)

The water chemistry in this area (Loc. #91-49) was: 26-30 degrees C (estimated), 3.7 pH and 8.1-8.2 umho's conductivity. The second flooded area visited on Igarape Cuaru (Loc. #91-50) was 28-29C, 4.3 pH, 6-9 umho's and dissolved oxygen (at 40cm depth) 0.9-2.3 ppm. DO's that low are normally lethal to all but the hardy *Tilapia* cichlids. The light levels were also very low. Two feet above the water, pointing up, Saul and Mario measured all of 80 foot candles. Pointing down gave a mere 4 f.c. The bottom was firm with a thick covering of undecayed leaves and both areas were rich in checkerboard cichlids.

Monday evening we pulled in at another sand beach. Evidently Labbish was so pleased with what we caught earlier he wanted to give us another shot. Jim and Veta jumped off the boat the boat and started beating the water to a froth with their seine. Scott and company went to see how big the caiman was that they'd seen as we anchored. Taking our own good time, Dee, Carl Camper and I stalked along the beach, catching more white doradid cats and 3-5" versions of the foot long whiptail cat, netted earlier. Dee even caught one! Now even she was hooked. The cats were about 3 feet from shore in 3-12 inches of water. You could spot them using a flashlight but you had to have a sharp eye. Their color matched the sand bottom perfectly, only their outline gave them away. The group caught another half dozen large whiptails but the collecting ended abruptly when Julian Whitefeather saw a snake and Jim stepped on a ray and was bitten by a spider, all within a few feet.

Tuesday, Oct. 8th

This morning I took a few habitat shots as we pulled away from the sand. The deep black water of the Rio Negro, bleached white sand of the beach and the striking greens of the jungle really made for some memorable photos. I've decided that since we've visited so many different locations during this trip, any programs will have to describe the various habitat types and their fauna rather than the old "I collected here and caught this, then I went there and caught that, etc."

About mid-morning we entered the Rio Branco, the major "white water" river in the Rio Negro drainage. Finally stopping in late afternoon, we'd reached our next destination, the game warden's house. This was where a small igarape (stream) entered the main channel. The bottom was muddy in places and sandy in others. As soon as the boat stopped, I was off again. A little sand bar just looked too inviting and I've never caught *Corydoras* cats in the wild. Bingo! The second net brought up a small light colored Cory. Even though I only caught two, it was a start.

Well, time to run up the creek we were anchored at to lake Curubau before it got too late. On the way up, we saw more new birds than during the whole previous part of the trip. A sun bittern spread its wings from an overhead perch, showing the feathered sunburst pattern for which it got its name. "White" water systems carry more nutrients which in turn feed a much larger and more diverse food chain.

The hanging adventitious roots really made this slow moving stream dark and mysterious looking, the perfect image of what comes to mind as "eerie jungle habitat". It scared the s. stuffing out of us when a 3 foot aruana broke the surface, just feet from our canoe. Of course we still kept our scientific curiosity and measured the water chemistry in the stream at 26C, pH of 4.6-4.9, conductivity of 8.5-11.4 umho's and dissolved oxygen of 1.0-2.5 from the surface to 20 cm depth.

There wasn't much light left when we got to the lake so Labbish and his students took off to make a scientific collection while we hit the shallows. In the leaf litter, we found three and four inch *Rineloricaria* *hasemani*, more *Apisto*'s, *pertensis* and a few *agassizi*, numerous tetras including some nice rosy's (*Hypphess. roberti*), *lampeyes*, *Rivulus obscurus*, small pike cichlids... and corys! Scott and I caught two each. When we gathered back at the pickup spot everyone got all excited but we'd have to wait to collect more.

We finally ran out of daylight and had to head back. As the flashlights scanned the water and stream banks, it became obvious that we were no longer alone. There were glowing red eyes everywhere! One four foot caiman just sat there on the bank as we paddled by. They were usually spotted lying submerged with the nose and eyes exposed. When our lights targeted them, they would slowly drop below the surface. At another spot, there were dozens of 12-15 inch juveniles. The guide, Masio (with an s) jumped in and caught one which we passed around and photographed. Dee even touched it! We let it go at Labbish's insistence and continued on to the Iguana. It seems that even the guides have been infected with our enthusiasm, I just don't think I would be caught jumping in a strange Brazilian stream after dark.

After dinner, some of us took it easy, others fished or jacklighted for discus. I went back to the sandy shore with Dee. We didn't get any more corys but Dee got excited about catching striped rafaels and 1/4 to 1 1/4 inch talking cats (*Physopyxis* *lyra* and *Amblydoras hancocki*). There were plenty of wolffish and tetras close in but what

interested me were the *Biotodoma* and *Geophagus* cichlids about a foot down, resting on the bottom. After numerous failed swoops of the net, I tried a different strategy. I brought the lip of my net down just 3 inches below the sleeping fish, then very slowly moved the net under the sand and gently up the bank toward shore. When a fish was completely past the lip, I'd pick the net straight up and claim my prize. I really hadn't planned on bringing any *Biotodoma* back, but these were absolutely gorgeous! Even in their sleeping color, the pastel blues, greens and pinks were so impressive that I simply had to put them in my bucket. They're going to look fantastic in my tanks back home.

Getting back on board the Iguana proved a bit of a challenge. The only boat left to use as a bridge was the small dugout canoe. When Dee tried to use it to get to the Iguana, she and her fish almost went in! Jeff came by in a larger canoe and transferred her for me. I went back to collecting cichlids until I looked at my watch, 12:40 am. How time flies when you're having fun. I had to step onto the dugout, put my bucket of fish, net and light on the Iguana's bow and try to haul myself up the side of the larger boat. All this was going on as the canoe under my feet was filling with water from a large crack in it's hull. Next time I think I'll follow Dee!

Fishing from the Iguana was also successful. Jeff caught an 85 cm, 8 Kg (33 inch, 18 lb.) redbelt catfish which Capt. Miguel said was a small one (they get up to 5 feet). It was excellent at lunch the next day. Jeff also caught a 3 foot diameter stingray large enough to break 25 lb. test line when it was lifted from the water. The trot line yielded a 2 foot redbelt and a 3 1/2 foot tiger shovelnose, also good eating. Finally, Scott scooped up a *Bufo marinus* cane toad that would not have fit on a large size dinner plate. All in all, a pretty good evening.

Wednesday, Oct. 9th

Tried again to catch *Corys* on the sandy area near the Iguana. I could see them in small groups but neither Carl Camper nor I could catch more than two. After a very frustrating hour, we didn't need too much prodding to give up and take another trip up to the lake.

On the way into the lake there were numerous dead falls to negotiate. Most of these had debris collected on their upstream sides. One swipe netted a couple of marmoratus eels and several bumble bee (*Microglanis* sp.) cats. Another net full, taken by Carl, contained a small spike-tailed cichlid. Not recognizing it, Carl asked me what it was. Since I'd just seen it's picture, the answer was easy. It was *Taeniacara candidi*, the beautiful little male looked every bit as splendid as the photo in the dwarf cichlid books. This was a "dream fish" right in my hand! Darn, that was the last trash pile I could reach before we got to the lake.

This time we sampled the area where Dr. Chao had been conducting his research. Again, it was the flooded margin of the lake and we collected in the clear, tea colored water down to about three feet in depth. I caught a gorgeous male *Apisto gibbiceps*, some yellow-finned *Cichlasoma amazonarum* and a bunch of *Aequidens thayeri* with their yellow fins and pink abdomen. I also caught a few false basketmouth cichlids which I eventually gave to Scott. I'm not going to travel thousands of miles to bring back ugly fish, not with what's available here.

As I was poking around in the shallows, I saw a black head with beady little eyes sticking out of a hole at the submerged base of a small tree. I watched until my mind came to the matching book photo for the creature I was observing... I just didn't think it was a good idea to catch a three foot electric eel with an aluminum net while standing in two feet of water. As Dave Schleser came over to get a look, the eel slipped back into it's hole. We did tell Jim Carmark about the eel and he immediately came over and tried his best to dig it out. Shoot! No luck, that would've been fun to watch. (I think every group's got someone like Jim.) You can't have this much fun back in the good ole' USA!

Having caught about everything we could in this spot and with only one Cory netted by Cheryl, we decided to go back to last night's location. At least there we'd caught a few Corys and killies.

We searched and searched, catching only more Apistos and Rivulus. Then finally, at both ends of this flooded stretch, Corydoras! I was on my way to where Jim was thrashing the water when I looked down to see a small school of tetras, with their black dorsal "flags" flying. "Wait a minute, those aren't tetras, they're Corys!", in mid water! I took a full five minutes to thoroughly search that net full of fish and debris but the 20-odd Corys were well worth the effort. So what if they later turned out to be *Aspidoras pauciradiatus*, it didn't matter.

Out of time, we headed back down the creek to the Iguana, beaming with our catch. On the way, I dipped my net into every trash pile I could reach. I'd hoped to catch more *Taeniacara* to go with Carl's nice male. As it turned out, I got 6 or 7 more, including some females. This became another of the 130 species we added to Dr. Chao's list for this area.

Once we got back and put up the fish we'd caught at the lake, you guessed it, back in the water. This time we wanted more of Cory sp. #2, the light colored one on the sand bank. Carl and I seined the water repeatedly but the best we could do was a dozen fish. Oh well, split 'em up and hope we could spawn what we got. At least they looked sexually dimorphic and at 3/4 inch, they're most likely a dwarf.

Time to move again. We're traveling back downstream to our guide Alberto's pig farm. Yes, I said pig farm. The location started out as "a lake with angels and discus". Then it was a "pond with angels and corys". And finally, "a pool with corys". It turned out to be a cesspool of swine manure and leaches! Well, at least it did have corys. I was beat after a week and a half of heavy collecting and besides, something just didn't sound right. Granted, our guides had become quite fond of us and wanted to please us by supplying good locations, but I was skeptical when the habitat continued to degrade. I decided instead to stay on board and tend to things like my fish and this diary. Good choice.

I guess Dee and I dozed off about 8pm, just a nap, honest. About eleven we both came to... eaten alive from insects! It must've been the pig farm. Here were all the nutrients in the world available to feed the aquatic larvae of hungry biting insects. I got up and checked out the new catch of corys, a third unknown species. I smeared Caladryl on my bites to try to relieve the itching then tried to get back to sleep. Unfortunately, the damage had already been done. It was a very agonizing night's rest.

Thursday, Oct. 10th

We spent most of Thursday under way toward Manaus, stopping once to let Labbish conduct bottom trawls while we collected another sand beach.

The beach didn't have much, but what it did have was exciting. First, Dee and Cheryl came around the end of the island in time to see one three foot and one five foot caiman resting on the bank. After the caiman slithered into the shallows, river dolphin came in close enough to get some decent photos, a rare occurrence for these normally shy animals. Jeff seined and cast netted a reverse trio of *Acarichthys heckeli* and some beautiful black-tailed Brycon sp. tetras. Finally, I caught two male *Apisto gephyra* in the hanging tree roots. These are thin bodied spade-tails, intermediate between *A. agassizi* and *Taeniacara candidi*. As luck would have it, I think I found two females in my collections from further up the Rio Negro. Only time will tell if they're pairs and whether they make it back alive. Jeff would eventually lose all but one *Acarichthys* from this catch.

The trawls were a unique part of this trip that had not occurred on any of my previous expeditions. It became quickly obvious that we were near civilization by the amount of bottles and cans in the collection. Aside from the trash, it was also obvious who ruled the bottom, eight meters below. The catch was composed of catfish, Mormyrids and Gymnotids. The cats were mainly Doradids and Pimelodids from six to twelve inches long. Most prominent of the other two groups were the marbled and transparent knifefishes. The real jewel of the trawl catches was a pink 15 inch long-nosed knife with tiny red vestigial eyes. None of us had ever seen most what was trawled up but this was a real departure from the norm. This probably blind fish would later call the Dallas Aquarium home, making the trip back safely under Dave's careful vigilance.

Friday, Oct. 11th

Today we dropped the canoes off at the floating restaurant and stopped for a while at another beach so some of the group could collect driftwood. I was content to continue bagging my fish. I recalled my mad rush to get packed and off the M/V Margarita in Peru 3 years ago. I didn't want a repeat performance. A few hours later I got to watch everyone else scramble while I relaxed with one last Skol beer aboard the Iguana. Before we said our final farewells on the boat, Dee and I went through the usual ritual of giving the crew tokens of our appreciation. Nothing much, t-shirts, a pair of pliers, fishing gear, towels, etc. They could always use the gifts and we didn't want to waste our weight allowance on non-essentials.

The scene at our hotel was that of a small zoo. With all our hootin' and hollerin' and bags and fish boxes I'm glad we had the floor to ourselves. There's no telling what the locals would've thought about this bunch. For supper, Labbish took us to an expensive rotating restaurant, four star! The meal was superb but think at this point we would've been happier with a quick (and cheap) stop at McDonalds. I don't know about the others but I checking for morts and rebagging until 1 am. Boy it felt good to finally get to sleep that night.

Saturday, Oct 12th

9:00 am: We're on the go again. This time Dr. Chao's taking us to the city market, the one I never got to when we arrived. We bought some coffee and other souvenirs and proceeded to the "fish section". Wow! Four foot dorado catfish and 2 1/2 foot

Pseudodoras cats (I hope it wasn't *P. niger*, I'll never be tempted to buy them again). There were 6" diameter silver dollars that salesmen processed by making closely spaced vertical cuts along the body. I'd noticed this on the piranha we'd eaten and can only guess that it might help the smoke to better flavor the meat. I didn't get to taste the silver dollars but I have tried three different species of piranha and they need all the help they can get! Besides, there are too many GOOD EATING fish available to worry about piranha. As we moved toward the end of the market, we passed 2 1/2 foot *Calophysus* sp. catfish and finally came to what is in my opinion the most spectacular catfish in all of Amazonia, the tiger shovelnose! Specimens ranged from 2 feet to magnificent animal almost 5 feet long. (It's owner had seen me photographing the other offerings and was proud to hold this monster in a triumphant pose that still gets "ohs" whenever I do my slide show of the trip.) That's one image I'll go back to often as my mind wanders to the really "neat" things I've seen here.

From the market, we motored to Aquario Corydoras & Tetra Ltd. This is one of four large exporters in Manaus, employing 13 people. As we strolled past small tiled vats and rows of plastic collecting tubs we viewed at least a dozen catfish I'd never seen before. although the exporters German version of "World of Catfish" helped identify the easy stuff like *Cory. sterbai*, the gold-wing cory, there were lots of other Loricariids that just weren't in the books, any books!

We came to a wall of tubs containing approximately 160,000 cardinal tetras, a mere 2 days worth of exports being prepped for shipment. Although other species are available, cardinals make up about 85% of the ornamentals leaving the city. This operation ships up to 2400 small tetras or 7-800 large per box and uses standard styros, plastic bags and oxygen, much better than the flimsy containers I saw coming out of Iquitos, Peru. In addition, collectors aren't allowed to capture cardinals from April through July, during the spawning season. In those months, exporters can ship only what's already in stock. Otherwise, Aquario moves about 500,000 of these tetras per month.

I learned that fish held for more than a few days are fed an egg-based diet. I should've guessed, you had to watch where you stepped to avoid the hen or her chicks that ran loose on the cement floor. In addition, this whole operation was run on a flow-through system. Unfortunately the adjacent creek had long since become too polluted to use so the proprietor made four trips daily with a 10,000 liter tanker to a good water source, 23 Km from town.

Thanks to Labbish's influence, we were able to use the pure oxygen to rebag our own fish and to make purchases... at exporter prices! I bought half a dozen gold-wing corys at \$1.50 ea (other corys sold for 5-20 cents), six medium Heckel discus for \$4.00 ea. and coming to the tubs of sexible zebra plecos I didn't get greedy. I only took (stole) 2 pairs at \$12.00 per fish. All in all, we spent nearly a thousand dollars for fish worth approximately ten times that figure.

That afternoon, we visited the Manaus zoo. It was rather curious that Brasil also regarded this as a military installation, since it doubled as their jungle training center! Having just spent two weeks in the boonies and being a graduate of our jungle school in Panama, I could make all sorts of comments here but hey, they don't have our budget either. The zoo was extremely cramped by our standards but we were finally able to view close-up many of the animals we'd previously only had glimpses of. There were huge

macaws with their brilliant plumage and 8-9 foot caiman like those from our evening ride from Lake Curabau. We saw large plump tapirs, previously known to us only on a dinner plate (delicious)! And we observed many creatures that had remained hidden to us during our outing such as the giant river otters with their shrill cries and the magnificent black jaguars and smaller cats like the ocelot and margay. In the gift shop I even found a hand-made doll for Mom and Dee bought the dried piranha she'd wanted.

We'd skipped lunch so on our return to the hotel, we walked half a block for some "real" food, pizza! Chased with beer, it sure tasted good after all the fish we had been through.

We partied that night at Labbish's house and all signed his guest book. I noted a number of "names", not the least of which was Sven Kulander, not bad company. From Dr. Chao's, we drove to a reception at Miguel's beautiful villa before our late supper. Miguel, the Iguana's captain and owner, sincerely enjoyed our tour with him. We were world's above his average clients in knowledge and enthusiasm about waters he called home.

Sunday, Oct. 13th

Last chance to double bag the fish and pull any remaining bodies. Then the travel agent's van beeps outside and it's time to go.

As the plane gently banks after takeoff I see a small winding stream below. "Just you wait little fishes, I'll be back..."

ed.note: Todd gave me this article quite some time ago and I promptly misplaced the disk it was on. As you can see, it turned up. This trip described in this article took place in 1991 (no, the article hasn't been lost on my desk since 1991, 1994 maybe). Apologies to Todd for taking so long to get this printed. J.M.

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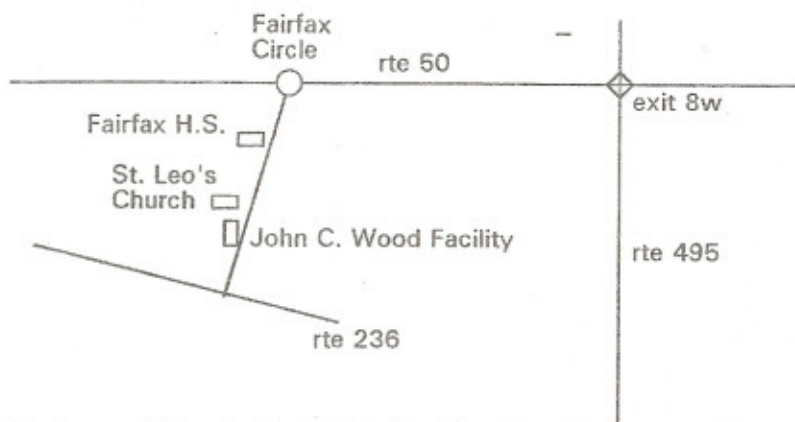
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