# An Aquarist's Experience Leading Amazon River Expeditions and Hobbyist Involvement in Conservation

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### Tales of a Gringo Doido.

Tropical fish hobbyists are passionate about ornamental fishes!

Their interests go beyond the individual fishes they have in their home aquarium and include all aspects of the industry. A tremendous amount of information about ornamental fishes, their behavior, and natural history has been acquired and documented by members of the hobbyist community. Most commercially available ornamental fishes come from distant tropical places. The fishes act as ambassadors of these regions and stimulate interest and concern. This enthusiasm and dedication, combined with increased access to information regarding environmental threats to the ecosystems where the fishes originate, form a valuable resource that needs to be tapped and applied to field conservation research.

In 1991 a pilot program was developed to package the resource that the hobbyist community represents and channel it directly into conservation research. A collaboration was developed between the Project Piaba of the Universidade do Amazonas and staff from the New England Aquarium. A group of 12 adventurous North American tropical fish enthusiasts was assembled and the expedition was planned.

The group was affectionately dubbed the "Gringos Doidos" (crazy Americans). The eclectic group had representatives from public aquaria, the tropical fish industry, hobbyists, and conservationists. The scientific team lead by Dr. Ning Labbish Chao and accompanied by graduate students, had a variety of goals to accomplish in the field. Two eco-tour boats were chartered to act as living quarters and transportation.

The team traveled to Lago da Rainha (Queen's Lake), off the Rio Demini. This site was chosen for its remote location – very little commercial fishing goes on there and it would be a good site to acquire baseline data. With Piabeiros (fishermen) as guides, the crew from the boat, the scientific team, and the Gringo Doido volunteers, the team numbered nearly twenty. A literal caravan of canoes was formed to paddle through the igapo' (flooded forest). Before departing, the people that lived in the small village of Saumauma, adjacent to where the large boats were tied off, estimated that it would take the group two hours to reach the lake. After an eight-hour aquatic jungle trek, the group concluded that their friends at Saumauma must have meant it takes a Brazilian two hours to reach the lake. In spite of aches, pains, and stings, the group was in top spirits. After spending three days working in the jungle and sleeping in hammocks strung up in the trees, the research objectives were achieved and it was time to return to the relative sophistication of the riverboats.

Not all of the sampling took place in the shallow, sun dappled water, of the igapó; a dramatically different habitat was the focus of the work of another of Dr. Chao's students. The team changed gears and prepared to collect fishes from the deep channels of the Rio Negro. The fishes that live in these channels have many unique adaptations; very little sunlight is able to penetrate the dark water and these fishes have developed other techniques for sensing their

environment. Some of the catfishes of the benthic community have barbels that are greater than the length of their bodies and the family Gymnotidae (electric fishes) make excellent use of their bio-electric capacities to make a living in this lightless ecosystem. During our expedition, hundreds of fishes were collected and preserved for later identification and study; some of them probably new to science.

Since this first expedition in 1991, at least one Gringo Doido expedition has taken place every year. The program has proven to be very complex; preparations for fieldwork itself are overwhelming and the addition of a group of non-trained field assistants with varying interest and skills increased the challenge. To date, over 200 people that have participated in this program. Many participants come down with apprehensions about the Amazon, concerned about jaguars and snakes. So far everyone has returned home intact, with the experience of a lifetime.

The Gringos Doidos have made a significant contribution to the Project. Many expeditions have been funded during some very lean times for Project Piaba, and this program has enabled the work to continue. A fishery-monitoring program must consistently obtain data over a long term. In some years these enthusiast-sponsored expeditions were the only means to get the team into the field to collect data. One of Project Piaba's greatest strengths is its sound scientific basis, and the hobbyists have played a key role in its development.

Beyond financing and participating in field research there have been many other positive outcomes from this program. The hobbyists have donated material and expertise. They are the essential vehicles for getting information about the Rio Negro to the consumers. Many of the individuals that have participated in the program write articles in the popular literature and trade magazines, others give seminars at hobbyist club meetings and conventions to share their experiences from the Amazon. Perhaps most important though is "to close the loop"; to bring the hobbyists, the consumers, the people that are driving this economy, into the field so they can see where their fish come from. They can see the habitat and get to meet the people who collect the fish and participate in the research. This serves as a very powerful source of inspiration and further motivates them to act responsibly.

### **Tropical Fish Hobbyists and Conservation**

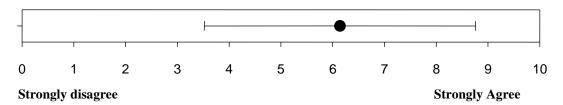
"Green equity" is a new phenomenon whereby consumers are willing to pay more for quality fish from a green fishery than substandard fish from a poorly managed fishery. The equity in a green fishery comes from the higher price per fish leading to fewer fish being caught to yield the same gross revenue. In a recent poll, US hobbyists indicated they were willing to support green equity, and would pay as much as 50% more per fish. This interest needs to be built into a certified program such as those being created by the Marine Aquarium Council, and FAO's fisheries code of conduct.

## **Survey of Ornamental Fish Hobbyists**

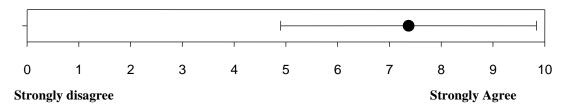
1) In the past, have you kept ornamental fish from the Rio Negro (cardinal tetras, rummynose tetras, marble hatchetfish, etc?)

Responses: Yes 32 No 4

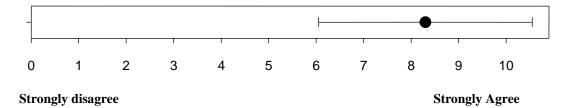
2) Do you have ornamental fish from the Rio Negro now? Responses: **Yes** 22 **No** 14 3) Most cardinal tetras available in the pet trade are in poor condition and are a risky investment.



4) If you had access to high quality, stable cardinal tetras, you would keep more.



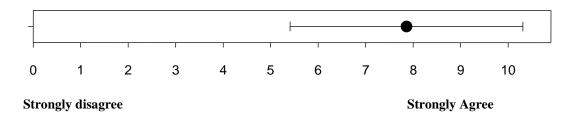
5) If you had access to ornamental fish that were labeled to be from a managed fishery that had a positive impact on the environment, you would chose to purchase these over ones that were not labeled.



6) If you had access to information about your individual fish such as:

- satellite coordinates of where the fish was harvested from
- the name and photographs of the fisherman and his family
- digital images of the habitat where the fish was harvested from
- environmental conditions and water chemistry parameters from the collecting site
- time and date the fish arrived and was landed
- health data from the lot
- acclimation history
- export date
- care and breeding information

Would this increase your interest in purchasing the fish?



7) Would you be willing to pay more for a "green certified fish and related aquarium products that support field conservation efforts?"

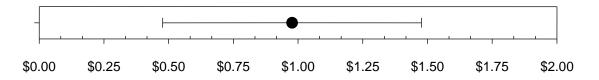
Responses:

Yes 25

**No** 0

Maybe 10

8) How much extra would you be willing to pay at the retail level for a "green certified" fish, that is part of this program? (based on a retail price of \$1.99 for a cardinal tetra)



### Q & A

**Sonnenschein:** Are the participants all members of the New England Aquarium?

**Dowd:** No. In the past there has been a pretty eclectic roster that's come on these trips. I don't do a lot of advertising. It pretty much just gets out through word of mouth so a lot of the people who come are mostly from my area which is the northeast, some people from New England Aquarium staff, others volunteers. The word has gotten out. Some have come from Europe, and Canada.

**Baquero:** What are the impressions that the hobbyists have once they have met the collectors and they know how their fish are collected?

**Dowd:** There are a lot of different impressions. It is definitely an eye opening experience. I think their concern increases because they see how fragile things are. I think aquarists come into this being accustomed to technology for maintaining fish and I think at first that people are surprised to see that so many fishes are kept in tubs without life support. One of the biggest impacts people get from a personal experience like this, when the subject of the Rio Negro comes up it catches their attention, but when they travel to the area and have such an intense experience, they never forget it. These 200 or so people who have been down, are continuing to promote the project. It's an experience that they'll never forget. The people who come down are usually "superhobbyists", the people writing articles, the people who are giving lectures. Experience is a seed and it continues to grow when they come back. It

is snowballing. More people know the word piaba. They keep Project Piaba in mind. I have gotten random phone calls me from people who have taken the trip five or six years ago. They don't forget.

**Harris:** What sort of information are you looking to take back to increase your participation?

**Dowd:** Well, I think the proceedings will do it. If you could spend some time evaluating our institutions, just imagine visitors coming in an aquarium and seeing an Amazon exhibit. What points would you want to get across and how would you do it? That's really challenging. People who come in and visit aquariums don't really like to read a lot. It's hard to get people to take their eyes off beautiful fish and look at a graphic panel with text.

**Keefer:** This is kind of a conversation that we had the other day with a bunch of people as far as what ways public aquariums can assist in these types of projects and one, obviously, that comes right to mind which Scott touched on is education. Bring able to educate the public because that's where our biggest - if you look at public aquariums across the country- the volume of people that come through public aquariums is phenomenal. The level of information that we can get out to the public is probably one of the key assets in terms of what we are able to do with conservation programs. Beyond that, public aquariums are starting now to work more and more with conservation groups like World Wildlife Fund, Nature Conservancy and trying to develop partnerships with the private sector, places like Tetra, for example. National Aquarium in Baltimore and New England Aquarium have been in a 3 year relationship with Tetra as far as being involved with sponsorship of community type programs, training, hobbyist-type of information. To me, this project is a natural next step for involvement with large major corporations in terms of funding. What needs to be done though is to be able to translate to those companies, like Tetra, how their involvement will benefit them financially. Unfortunately, that's kind of the bottom line. If you want to get sponsorship, with these companies they have to see some financial end product for them whether it be public relationships and how that relates back into sales, but that's the real trick because that's where I see there are great opportunities in terms of being able to get grant money and partnerships with these types of projects. There can be a direct relationship or there can be an avenue painted for Tetra to understand those relationships and how they can benefit - a symbiotic relationship.