



Amazon Research Center For Ornamental Fishes

ARCOF

NOVEMBER 2020 NEWSLETTER

Internships and Volunteer Opportunities

You have heard the saying "the best laid plans of mice and men often go awry". We had truly hoped that we would be able to have interns and volunteers at the center this Fall. However, the pandemic made that impossible. As of this writing, and with the hope of a vaccine, we are now looking at the summer of 2021 for interns/volunteers to start at the center. Year-round opportunities will also be available once we are able to host interns and volunteers. For more information or to apply please visit our website at amazonresearchcenter.org and click on the "Get Involved" tab.

Fall Fundraiser Update

Shortly after Labor Day we initiated a 6-week campaign to raise \$10,000 to purchase two specialty aquaria (tanks) for the Aquarium of the Amazon. The campaign was hugely successful and thanks to your generosity we actually raised 111% of our goal (\$11,181). We not only raised enough money to purchase the tanks, but



we also raised enough money to pay for the shipping from China. Currently, China is the largest manufacturer of plexiglass and as such the pricing tends to be more reasonable. However, an unexpected side effect of the pandemic is the increased demand for plexiglass; plexiglass is used for barriers, shields, sneeze guards, transparent cubicles.... you get the idea. The increased demand has changed the landscape with more manufacturers getting into and expanding their plexiglass offerings. In lieu of these changes we are going to take a few weeks to do our due diligence to ensure we are getting the best product for the best price. Our goal is to have the tanks ordered by year end to

ensure they will arrive in Iquitos by June of 2021. Regardless of who we order the tanks from they will have to be shipped by boat which takes several weeks.

The Aquarium of the Amazon

The enclosed is a Google Earth picture of the Research Center including the Aquarium. Visitors to the center will enter through the gate in the top left corner. To the right of the Aquarium building is a large open area. This will be a grassy area with picnic tables, shade, and some type of play structure. Visitors will be able to relax, enjoy a refreshment and children will be able to play.

At specified times, a “behind the scenes” tour will be offered which will include the wet lab/fish lab as well as a view of all of the equipment that supports the actual tanks in the Aquarium. The “behind the scenes” tours and access will be a part of our Junior Conservationist program. This program will introduce the children to the fish that are being captured for the aquarium trade; most of the children are familiar with the fish that are used as food fish. Utilizing age specific educational techniques, the junior conservationist program is divided into



the following age groups: 4-6, 7-10, 11-13 and 14 and above. The program follows a similar structure as that utilized by the Boy Scouts and Girls Scouts of America; in that there are activities, tasks, readings, and knowledge challenges that must be met in order to advance. Built into the activities are the concepts of conservation, sustainable environments, renewable resources, and the ecology of the fish of the Amazon River basin.

One of our focuses is to provide care and to re-establish fish confiscated by customs. ARCOF received designation to become a receiving center for confiscated fish or aquatic animals by the Ministry of Fisheries and Customs in 2019. Fish that are confiscated by customs are very often fish that are highly sought after in



the aquarium trade and are being illegally shipped out of Peru through the black market. Historically, confiscated fish were released into Lake Quistococha which is approximately 10 kilometers outside of Iquitos. The lake is fed from rainwater that percolates through the soil and is classified as a “peat” lake, which is unique in Peru. What that means is that the water is

very acidic and that the animals and fish that live in Lake Quistococha have evolved to survive in that environment. At the time of this writing we have been contacted by customs regarding a shipment of Dorado catfish (*Brachyplatystoma rousseauxii*). One hundred Dorado were seized by customs, the ownership is uncertain at this time. We have agreed to take the fish once ownership is determined. Although many large Amazon catfish are known as “Dorado”, this particular species is among the largest growing and most distinctive. The Dorado is an impressive fish, but one suitable only for enormous custom aquariums or large indoor ponds. If we take these fish, we will ensure their health and reintroduce them back into Rio Nanay where they are most commonly found.

Introducing the 10 to 100 Club!!

From the beginning our goal has been to create a meaningful, lasting impact on the world, most specifically in the Peruvian Amazon. We have experienced some ups and downs in this journey to date, but overall have made slow, steady progress. We could not have gotten as far as we have without your support. The unfortunate reality is that it's hard to make a difference without money. It's even harder to make a difference with an ongoing pandemic that has impacted all of our lives, some more closely than others. None-the-less, with your support, we are going to be able to open the Aquarium of the Amazon in 2021.

We are committed to the research center and to all of our committed followers we would like to invite you to become a member of the "10 to 100" Club. The "10 to 100" Club includes supporters who have become recurring donors. These donors have made a commitment to make a monthly donation of no less than \$10, no more than \$100 or somewhere in-between. We invite you to become a bigger part of this journey, to help make an impact that will last. Please follow this link

<https://amazonresearchcenter.networkforgood.com/projects/115331-the-10-to-100-club> to start making your recurring donation today. By becoming a "10 to 100" Club member you will receive a small gift as a token of our appreciation. Be sure to include your mailing address when you make your donation to receive your gift.

What your donation supports:

<ul style="list-style-type: none">• \$30,000 - Naming Rights to the 6,000 Gallon Aquarium• \$5,000 - Naming Rights for a Room• \$3,000 - One Filtration System• \$2,500 - Nikon Dissecting Microscope• \$2,000 - Nikon Binocular Microscope	<ul style="list-style-type: none">• \$1,500 - House 1 Intern for 1 Month• \$1,000 - 400 Gallon Aquarium• \$750 - House 1 Intern for 2 Weeks• \$600 - 140 Gallon Aquarium• \$300 - 100 Gallon Aquarium• \$200 - 75 Gallon Aquarium
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The CARES Act

As you consider your year-end giving, you may want to consult with your financial advisor about the CARES Act (Coronavirus Aid, Relief, and Economic Security Act). To those who itemize their taxes it offers the ability to deduct up to 100% of their adjusted gross income (AGI) for cash contributions to most qualified public charities for the 2020 calendar year. ARCOF [a 501(c)3 non-profit organization] is a qualified charity, which means there could be a greater tax advantage for supporting us this year. We want to be sure you are aware of this potential tax benefit and **recommend** you speak to your financial advisor about how the CARES Act may impact you personally

Trends that are being seen with the CARES Act which may be appropriate for you include:

- Donors are taking advantage of the additional tax benefits provided through the CARES Act, which means you may be able to deduct more in 2020, than in previous years.
- While the stock market is in flux, donors are finding creative ways to use the CARES Act for stock charitable gifts; stocks that have a gain or loss.
- Overall, there has been an increase in estate planning because of all the uncertainty with COVID, social justice, the elections, stock market volatility, etc. An estate gift is allowing people to do something today that will contribute to a future impact.

Critical Facts About Invasive Species "Alien Invaders"

What is an invasive species? **What** does it mean when it is said that the invasive species has become naturalized? **Why** does it matter?

- Invasive species are plants, animal, fungi, and bacteria that are non-native to the ecosystem around it. There are three different categories of invasive species: (1) invasive animal species, (2) invasive fungal and or bacterial species, and (3) invasive plant species.
 - An invasive species is one that has been brought into an environment where it does not live naturally and where it causes harm to the local environment, economy, or human health.
- A naturalized species " means any species or subspecies of animal that is not native to an environment but has established a wild, self-sustaining population in that ecosystem".
- The International Union for Conservation of Nature (IUCN), the organization that produces the Red List, was able to quantify animal extinctions caused by invasive species.
 - Of the 170 extinct animal species, where the cause(s) of extinction were listed, invasive species were a contributing factor in extinction of 91 species and the **only** factor in the extinction of 34 animal species.
- Tilapia, the third most important fish in food aquaculture worldwide is also recognized as being among the most aggressive invasive fish species in many subtropical and tropical parts of the world. Tilapia was placed on the IUCN's "100 of the World's Worst Alien Invasive Species" list in 2000.
 - Tilapia are among the easiest and most profitable fish to farm (aquaculture) due to their omnivorous diet, mode of reproduction, superior tolerance of high stocking density, and rapid growth.
 - Tilapia are also resistant to wide varieties of water salinity, oxygen, and pollution levels, and can migrate long distances. They are difficult to catch by angling and are able to occupy a wide range of habitats. Removal from natural water resources where they have become established may be impossible.
 - The most effective management is complete isolation of individuals from natural waters to prevent introduction (IUNC). In other words, do not let this fish into the natural ecosystem, it will outcompete and out-reproduce most other fishes.
- Aquaculture started in Peru in 1934 when the rainbow trout was introduced for sports fishing, thus becoming the first freshwater species to be cultured in the country.
- In 1962, tilapia was introduced as food for a native species (paiche), and later to become a primary fish in food aquaculture in the 1970s. The industry continued to grow in the 1980s through pond and cage aquaculture to become a major multimillion-dollar industry today.
- In the summer of 2019, Dr. Anthony Mazeroll along with two students discovered a juvenile tilapia in a small stream approximately 15 kilometers outside of Iquitos, far from any aquaculture facility. They also discovered environmental DNA for tilapia, which indicates there is a large number of tilapia in the area or the water is in direct or almost direct runoff from an aquaculture facility. These findings are very worrisome, so much so, we are in discussion with the IUCN and SHOAL to get funding to sponsor an assessment of the incursion of tilapia into the waterways surrounding Iquitos.

