



# World Fish Migration Day: An Interview with Zeb Hogan

Peter Turcik | Fisheries Managing Editor. E-mail: [pturcik@fisheries.org](mailto:pturcik@fisheries.org)

May 16 will mark the 2020 World Fish Migration Day celebration, a 1-day global celebration to create awareness about the value/benefits of open rivers and migratory fish. Organizations from around the world will coordinate their own events around the common theme of “Connecting fish, rivers, and people.” I was able to speak with one of the World Fish Migration Day ambassadors for the USA, Zeb Hogan, and learn about his experiences around the world and also how anyone can participate in this global effort.

Dr. Zeb Hogan is a Research Biologist at the University of Nevada-Reno, the United Nations Convention on Migratory Species Councilor for Fish, and a National Geographic Society Explorer. Zeb hosts the National Geographic Television series “Monster Fish.” Zeb received his PhD in ecology from the University of California, Davis in 2004. His research interests include freshwater fish ecology, fisheries management, and endangered species issues. Since 2006, Zeb has worked with the University of Nevada-Reno and the National Geographic Society to merge conservation science with education and action.

## In your years of traveling, research, and angling, what was the catalyst for your work with migratory fish species?

I got interested in fish migration and native fish ecology as an undergraduate and after I graduated, I spent a year studying in Thailand, where I applied the lessons I learned as an undergrad to look at migratory fish in the Mekong River. Mekong fish

are an important resource in the region; there are many, many species of migratory fish, including fish that migrate long distances, that were going to be impacted by plans for large dams on the Mekong. This was back in 1996. That was the catalyst for me to become a fish biologist and for my interest in fish migration. I did my PhD on a group of migratory catfish in the Mekong River called *Pangasiid* catfish. They are commercially important. There are about a dozen species in the Mekong—at least one species is anadromous. So I did my dissertation on this anadromous catfish that moves between the Mekong and the South China Sea. I also looked at species like the Mekong Giant Catfish *Pangasianodon gigas* that can grow to over 10 feet long and makes long-distance migrations along the Mekong. It is critically endangered and is possibly being driven to extinction by some of the dams that are being built. That is where my interest in migratory fish came from and it has continued to grow throughout my career. My interest continues to grow and it has grown further as I have become involved in World Fish Migration Day and with the World Fish Migration Foundation.

My dissertation was on migratory catfish and, at the time, the Convention on Migratory Species had a competition to submit your dissertation for consideration as a good example of science on migratory species and my dissertation won an annual award. As a result of that recognition, I also became involved with the Convention on Migratory Species and work with them on issues related to migratory species. So there are lots of ways I have been involved with migratory species over the years.



Zeb Hogan (right) and others revive a Mekong Giant Catfish measuring 240 cm. Photo courtesy of Zeb Hogan.

### How important are these migratory fish to their ecosystems?

They are certainly very important to their ecosystems. I think that our understanding of how important a lot of these migratory species are to their ecosystems has not been well studied. I have worked a lot in large, tropical rivers—especially in the Mekong—and I don't think we have a great understanding of how important these fish are. If you just look at their importance to other fish and other animals, they are incredibly important. You have large colonies of birds on the Tonlé Sap Lake that are feeding on these fish. You have freshwater dolphins that are dependent on migratory fish. Of course, you have predatory fish that feed on smaller migratory fish, and people that are incredibly dependent on migratory fish. In a place like the Mekong, where it has been estimated that 40–70% of commercially important fish are migratory, it is hard to overstate their importance.

And of course you have the more classically studied systems with salmon, and eel, and sturgeon; those are also incredibly important, not only to people, but also to the ecosystems where they occur.

### What major threats affect migratory fish species?

Dams. In my mind that's the main trend. A lot of these species—salmon, sturgeon, migratory catfish—their populations are threatened by unsustainable harvest, in certain cases, but for the ones that are endangered, dams have been the nail in the coffin. The species that are doing okay now, you see dams go in and in a lot of cases you see populations of migratory fish plummet.

Two examples: there was just a main-channel dam completed in northern Laos and that is thought to be potentially blocking the spawning migration of two species of critically endangered giant catfish—the Mekong Giant Catfish and the Chao Phraya Giant Catfish *P. sanitwongsei*. Those two species are very close to extinction and we think that dam is blocking one of their only known spawning migrations.

There is also a case I saw down in the Amazon on the Madeira River. You have these catfish in the Amazon that are making these incredibly long-distance migrations and, historically, used to move all the way up the Madeira River system. There are now two new dams that were built within the last decade that appear to be almost completely blocking those migrations.

### Are you involved in any projects that study the effects of these dams?

The biggest project I am involved with right now that indirectly deals with the impacts of these dams is called the Wonders of the Mekong project. It is a large project that I manage in Cambodia. Rather than focusing on the dams themselves and emphasizing the negative impacts of dams, the Wonders of the Mekong project focuses on the remaining, undammed, free-flowing sections of the Mekong and Tonlé Sap rivers in Cambodia to emphasize the positive benefits that free-flowing stretch of the Mekong provides to people and to wildlife in that region. At some point we will also look into ways to mitigate the impacts of dams, but this project really focuses on the value of the remaining free-flowing stretches of the river to people and wildlife.

### **How has the project gone over with the people you are trying to reach?**

It goes over very well because it is a positive outlook on things. We're working with fishermen, who depend on migratory fish. We're working with the Fisheries Administration, the Ministry of Education, and the Ministry of Tourism, who are interested in the project; everyone can get on board.

This is the idea with World Fish Migration Day. I think it is much easier to get people together to focus on the positives than to fight about the negatives. The project has been very well received; it's easier to find partners. The trick is to have a long-term impact, and I think we are having that impact in terms of raising awareness of the importance of this stretch of river. I can't see the future to know what this river is going to look like in 50 years, but we're doing what we can and it has been very well received.

### **What do you feel is the best way to protect migratory fish? What can people do to contribute to this effort?**

I think a big part of this is to become more knowledgeable; more involved; that's a big reason I support World Fish Migration Day. That's the reason it has been so successful. World Fish Migration Day is very inclusive. It is a way to connect rivers, fish, and people. There are lots of different ways people can get involved. The focus is on raising people's awareness of these issues and getting them out and connected to their local rivers and local fish, in some cases to influence policy, in some cases we are talking about direct action—for example, to remove dams in certain cases. I think the first step is to get involved with events and organizations like World Fish Migration Day that can take that first step to connect people with rivers and fish. Then as people get more educated and more involved they can take more serious, hands-on steps.

One example of this, I live in Reno, Nevada, and we have the Truckee River, which has a lot of dams on it; it's heavily fragmented. We have issues with keeping water in the system for the benefit of fish. But, as people have become more aware of the issue, and they have become more open to working together, there are better flows down the Truckee, timed in a way that is more beneficial to the fish and life living in the river. We just had a new modification to the dam furthest downstream to try to allow some fish passage up to spawn naturally in the river.

World Fish Migration Day is great because it is very hands-on. You might think of it as a day, but for people involved in it, such as Herman Wannigen (World Fish Migration Foundation Creative Director), myself, and others involved, it's a 2-year process that brings everyone together, that focuses people, and causes us to think about strategy and what we want for rivers and fish. The events are spread out over a month or two all over the world. It is great to see the organizers come together and to see the final product.

### **Are you doing any special projects for World Fish Migration Day?**

One of the reasons World Fish Migration Day has been so successful is that it is very inclusive; there are many different ways people can be involved. People of all different ages can be involved; it can be schools, it can be nonprofits, government agencies; anyone can be involved. This will be the third World Fish Migration Day that I have been involved with and I look

for opportunities for anyone that I work with anywhere in the world to participate and make sure they know what World Fish Migration Day is and then encourage them to participate in any way they can. For the last World Fish Migration Day, I helped organize a fish release, I developed an exhibit called "Underwater Nevada" that was shown at our local museum. We organized around 20 events through the Wonders of the Mekong project in Cambodia, and so I will be doing similar work in 2020, reaching out to anyone I know that will be interested in participating. We are hoping that World Fish Migration day is twice as big this time around. We hope to organize 30 or 40 events with our partners in the Mekong region in 2020.

*For more information on World Fish Migration Day and how to participate, visit <https://www.worldfishmigrationday.com/> *