SAVING THE RIVER GIANT: THE SOFTSHELL TURTLE COMEBACK STORY – VIDEO TRANSCRIPT

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Welcome everyone to Conservation Nation Academy's LIVE! lesson. We're so excited that you're here with us today.

We have an amazing conservationist who's part of our 2026 grantee cohort, who's going to be talking to you about a really interesting species that she works with.

So, I'm very proud to introduce Ayushi Jain who is a conservationist and a PhD student at the University of Miami and she's going to talk to us today about her work to save the Cantor's giant soft-shell turtle. So, Miss Jain, take it away.

Thank you. Good morning, everyone. My name is Ayushi Jain. I'm a Conservation Nation grantee for the year 2026. I will give you all a hint of where I'm from. Can any of you name what this structure is that you see on your screens?

Uh, is it the Taj Mahal?

Yes. It's the Taj Mahal. It is in the city of Agra in India and that is where it I am from.

Although growing up in Agra, I never had any opportunities to see or interact much with wildlife, and the first time I saw turtles, you can see in the picture here, was when I was 20 years old during an internship. I was much older than most of you here in the classroom and it was during this internship that I realized how little we know about Freshwater turtles.

And because of this uh internship uh I start I it led me to focus my efforts on freshwater turtles for my career. I ended up getting selected among 18 people in Asia to receive a fellowship from the National Geographic Society and Edge of Existence program.

This fellowship supports the conservation of rare and endangered species which are on the verge of extinction. uh and I was selected to work on the Cantor's giant soft-shell turtle.

Uh but before I move on to tell you what about this turtle, I want to
ask you uh how many of you know what a soft-shell turtle is? And do any of you know if we have one in the United States?

Students are saying no.

Okay. So, uh we actually have three softshell turtle species in the United States and uh one in Florida where I am currently based. So cantor's giant soft-shell turtle, the one pictured here, it's an evolutionarily unique species which is currently on the
Verge of extinction.

Now that means that if we lose this turtle, there is nothing like this on this planet. This turtle can grow up to be 1 meter in length. It's like this big or 100 cm in length which makes it one of the largest freshwater turtles in the world. The international body called the IUCN uh lists the species as critically endangered and they report about 80% population decline which means it's very close to extinction.

But why soft shell turtles? You might be wondering and what are soft shell turtles. So these are among the freshwater turtles family. It is very crucial. These turtles are very crucial in maintaining the health of aquatic ecosystems, meaning your rivers, your lakes, uh, and they're often called as the cleaners of the river because they eat all the dead and decaying matter in the river and they keep our rivers healthy and clean.

And soft shell turtles are characterized by their morphologically bizarre appearance. So, they're not like your general hard shell turtle. They're like soft and leathery. And because of that uh they're also very highly aquatic.

Currently 70% of the total soft shell turtle species in the world are threatened with extinction. Uh and a lot of these species of soft shell turtles are very under-studied. So like you can see how many of you don't even know that soft shell turtle what soft shell turtles

are. And similarly, many of the scientists we don't know what these turtles are like where do they live. So, like they are very highly understudied which makes it very difficult to manage these turtles and to come up with strategies for its conservation.

A very uh unique and a cool thing about the turtle that I study which is the cantor's giant soft-shell turtle here on the corners of your screen. Um they're very cool because although they are freshwater species they can tolerate and live in Anchialine conditions which also makes them widespread across uh the globe.
Um so this turtle it is uh spread it is distributed across Asia but I focus on my work in south of India. So you can see in the map here uh and the river is shown here and I like I'll try to use can you see is it visible my oh yeah.

So this is the river that I work is work in and it's called the Chandragiri river.

So to begin my work I had three initial goals. I wanted to collect local ecological knowledge that means knowledge from the local communities and then I wanted to identify different threats that this turtle faces in India and then create an alert network of community members that would protect this turtle.

So while working we identify a few threats. Um we found that these turtles because they're soft and leathery there's like a lot of meat in them and they are collected and eaten by the local communities because of that reason.

Uh furthermore we also identified that human induced habitat alteration mainly for agriculture um sand mining for construction purposes and dam construction was also threatening this population of Cantor's giant soft-shell turtle.

And in the next video, in the next slide, I'll show you some more of these results. So, we found uh some of the behavioral patterns of this turtle. They like to dig themselves and stay under sand for a long period of time.

We started doing a lot of awareness workshops because we realized that people were killing these turtles. And through these awareness workshops, we got to create this alert network where people would release these turtles back in the wild when they catch them instead of killing and eating them.

Uh we found a network of more than 50 people from the local communities who would report to us when they find any turtles, send us videos of releasing these turtles back in the wild.

In 2020, we had a milestone when one of our community members found the first sign of breeding. That means these turtles were laying eggs and that gives us an opportunity to protect this turtle's future generation.

Um, but we realized that because of the dams, a lot of times these areas of sand and eggs were getting flooded uh because of the water alteration.

So we started protecting these nest in artificial incubation and once we have hatchlings come, we would monitor them for a few days. We would see if they're healthy to be released back in the river. Uh we would just see if uh if they're feeding on well on their own and look at how strong they are.

And once we realized that okay these hatchlings are back ready to go back to the river we would have all the community members come together and release these turtle babies back in the river and this brought a sense of pride in the local communities and we even got to declare the species as the district animal in Kasaragod, that is where I work.

So these efforts have led us to also continue the protection of these nesting habitats. Uh, can any of you point out if you see the turtle nest mark here?

Yes, the student is pointing it out. Um, I think I think the turtle nest is about right here. Yeah, he he's pointing it in the middle.

Okay. Yeah. So, I don't see where you're pointing, but I think like you can see a like large depression and that's how we see where the turtle have laid nets.

So we do these surveys and uh we find out where the turtles have laid nest and we also put camera traps. You can see right here in the corner. Um so you can see how these nests are very close to the water.

And because these banks are relatively low and close to the water, they're also vulnerable to flooding when there is any water fluctuations because of dam operations.

Once we find a nest, we make a call whether or not this nest is in any danger of inundation or like flooding. And if it is, we take certain nest characteristics such as the total nest depth, the diameter of the nest and the depth till first egg and we collect this data.

So if we do move the nest, we can replicate these characteristics in the artificial setting in order to increase chances of survival. So we move any nest which is in danger of getting flooded to these kind of artificial incubation settings. Uh and we fence this nest in a way that when the hatchlings arrive they can move to these water trays that you see. And what this does it when the hatchlings do come usually they will find their way to the water to the river.

So if we don't have these water trays kept for them they will be exposed to the sunlight too much and they might not survive. So we make sure that there is water for them in this artificial setting.

So over the past 6 years we have documented 25 nest in a total uh including four nests that we found this year in 2026.

And overall from these 25 nests we have gotten a total of 701 eggs but we only recorded 102 hatchlings.

Now this is a little concerning because in the ideal scenario we would typically expect much higher hatching success um and also because once the hatchling arrives they go to

the river and they have to survive right so the survival rate is even lower than the hatching rate.

So when the hatching rate is itself is low the long-term survival of this population becomes slight concern. Um, and one of the reasons that this hatching rate might be low is because we as scientists move the natural nest which kind of causes interference.

Now,can anyone tell me why we're moving it in the artificial setting in the first place? I just mentioned it.

Yes, a student is coming over to answer. So it doesn't flood.

Yes. So, we are moving them because we don't want them to get flooded. So, this is kind of like a situation that we can avoid. But dams just don't impact biodiversity right now.

My project is to understand how we can manage dams but we can't make this decisions just based on biodiversity. This is because dams also provide a lot of benefits for a lot of people and when it comes to people we have to also consider the importance of dams for communities and not just the impacts on wildlife.

So in order to do uh make a better decisions, we work with the local communities and we identify what are the better ways that we can manage these gems by collecting data on how they are getting benefited in what regions are they getting benefited in what regions are they getting impacted and then we can find tradeoffs and see how we can balance the needs of people with the needs of turtles in a better way. So through my work we bring together not only communities but also local government bodies and scientists to make a overall a better plan for management of plans and uh this is what we're currently working on right now.

So, we can go to the next slide and I'm open to questions if any of you have any questions for me.

[Time for Questions]

Thank you. Uh I wonder why do you think turtles are important for the community?

Um so we the turtles as I said are the cleaners of the river right and these communities depend directly on these rivers because they use the rivers for drinking water. They use the rivers for agriculture like they take the water for their fields.

They also use the river because they want fishes from the river.
And if these rivers are not clean this river will get polluted. And that's why we need these turtles to clean these river systems naturally. And that is what we try to like tell people that we need these turtles and engage them in conservation.

Thank you, Ayushi. We have another student question coming up. Uh do you enjoy your job?

That's a very good question. I love my Job. Uh and I get a lot of like happiness from this job. Um I love working with turtles. They're very cute and I love working with people because people surprise me when they engage in conservation and they do things that not just benefit them but also benefit the turtle. So I do really enjoy my job.
Thank you for asking.

Yeah.

Awesome. Another student question. Uh what's the biggest obstacle you face in your job?

That's a very good question. So I am actually not from the state where I work in and in India every state has their own language. So I don't speak the local language which is one of the biggest obstacles for me because I work a lot with the local communities. So I always have to have a translator with me. Uh and because I've worked in the area for like about 8 years so I can understand the language but I still am very bad at speaking the language. So, I need

a translator and that sometimes make it hard to like connect as closely with people as I would like to. Thank you.

Yes. And then you.

What does... What does the turtles having a soft shell like... like endanger? Like what predators like use their soft shell against them?

Can you say that again?

Like since the turtles have a soft shell

Mhm. Yes.

Does the turtles have a soft shell, how do they protect themselves?

Ahh, so these turtles because they have a soft shell, they have to be faster than a hard shell turtle. So they're much faster, much better swimmers, and they're very highly equated.

That means they don't really come out very uh often on the land. Uh, and they like to dig themselves and cover themselves under the sand substrate in the river. So, like they have limited capacity to protect themselves outside of water, but they're also faster than a normal hard-shell turtle.

And they have a big jaw, and if you see some of these pictures of this turtle, at least the species that I work with, it has a plate. They don't have regular teeth like how we do. They have a plate and if they bite your hand, it can take away the hand unfortunately. And so people have to be very careful because they have a very strong jaw and they can take off your entire hand if you handle them wrong. So we always try to handle the turtle from the back of the body. So like if the face is this way, we'll always hold it from the back and make sure it doesn't come the mouth doesn't come near our body. So that they have a very strong bite. We do not want to be in front of that.

Yikes. That sounds kind of dangerous. [laughter] We have question.

When did you start liking your job?

Um I always liked I think like uh like as a child like as I said I never got to uh work or like see a lot of turtles or like wildlife in Agra. So like I was very I was like I want to go something and do something dangerous. And that's how I started like going in the field. But like once I was in the field and I started like seeing turtles I was like oh they're very cute. And that was like I had to be out. I got to be outside the classroom which was fun as a kid. I didn't want to sit in the classroom much. So that's when I was like okay this is a good job for me I think so! I think like every day we have certain questions still whether or not I like it but like I mostly like it.

Thank you. And we have one last student question.

What was the biggest soft-shell turtle you have ever seen?

The biggest social turtle ever seen is the one I work with. Uh so that is a very sad story actually because we had we had been looking for the turtle for many days and we found one dead one which was about this big. So like I have a picture maybe that I can share with you at some point but we look very small in front of that huge turtle but it was dead. So that was the biggest one I saw. Uh, I would have liked to have liked it to have survived, but it did not. Unfortunately, it had come under the dam when it was trying to cross the river.

Well, thank you so much, Ayushi, for answering our questions. I think now we're ready to move on to Kahoot.

[Time for Kahoot]

[Closing Remarks]

Okay. Well, thank you all so much for your time, your attention, your participation. I learned a ton about this adorable species. And let's join in giving a hand, a thumbs up, a round of

applause for Miss Ayushi Jain, our conservationist, who is doing this amazing work to try to save the Cantor's giant soft shell.

[Applause]

Thank you, Ayushi. Any last words before we close the lesson?

Uh, thank you so much for being interested to learn about the Cantor's giant soft-shell turtle and I hope you all get to see a soft-shell turtles soon in your life much before I got to see one.

And yes, like feel free to reach out to me and like if anyone of you want to like follow in conservation steps and similar career choices, please feel free to ask me questions outside of the classroom as well and I'm happy to help. Thank you so much again.

Great. Thank you so much, Ayushi, and thank you again all for your time. Um, we hope you have a great rest of the day and we'll see you next time on Conservation Nation Academy Live.

Thank you.

We hope you enjoyed this lesson!
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