

UK zoo helps lost Mexican fish live to see another Tequila sunrise

Declared extinct in the wild in 2003, species has been reintroduced to its native river after being bred in Chester



‘A rare success story’: tequila fish are thriving after their reintroduction in Mexico. Photograph: Chester zoo/PA

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A “charismatic little fish” declared extinct in the wild has been reintroduced to its native Mexico after being bred in an aquarium at **Chester** zoo.

The tequila fish (*Zoogoneticus tequila*), which grows to no bigger than 70mm long, disappeared from the wild in 2003 owing to the introduction of invasive, exotic fish species and water pollution.

Named after **the Tequila volcano**, which looms north of its native habitat, the species was discovered in 1990 in the Teuchitlán River in Jalisco, south-west Mexico.

Now conservationists at Chester zoo and the Michoacana University of Mexico have teamed up to return more than 1,500 fish to the river in a project cited as an International Union for **Conservation** of Nature (IUCN) case study for successful reintroductions.

Recent studies have confirmed that the fish are thriving and already breeding in the Teuchitlán. Experts say it has created a blueprint for future reintroductions of other highly endangered fish species, with a rescue mission for another, the golden skiffia (*Skiffia francesae*), now under way.

Prof Omar Dominguez, of the Michoacana University of **Mexico**, said: “This is the first time an extinct species of fish has ever been successfully reintroduced in Mexico and so it’s a real landmark for conservation. It’s a project which has now set an important precedent for the future conservation of the many fish species in the country that are threatened or even extinct in the wild but which rarely take our attention.”

In 1998, at the outset of the project, the university’s aquatic biology unit received five pairs of fish from Chester zoo. These 10 fish founded a new colony in the university’s laboratory, which experts maintained and expanded over the next 15 years.

In preparation for the reintroduction, 40 males and 40 females from the colony were released into large, artificial ponds at the university. This exposed them to a semi-natural environment where they would encounter fluctuating resources, potential competitors, parasites, and predators such as birds, turtles and snakes. After four years, this population was estimated to have increased to 10,000 individuals and became the source for the reintroduction to the wild.

A long-term monitoring programme was established involving local people trained to assess water and habitat quality.

Dr Gerardo Garcia, Chester zoo’s curator of lower vertebrates and invertebrates, said the successful reintroduction was an important moment in the battle for species conservation.

“It is a real privilege to have helped save this charismatic little fish and it just goes to show that with the skill and expertise of conservationists, and with local communities fully invested in a reintroduction project, species can make a comeback from environments where they were once lost,” he said.

“With nature declining globally at rates unprecedented in human history – and the rate of extinction accelerating – this is a rare success story. We now have a blueprint for what works in terms of recovering these delicate fish species in Mexico and already we’re on to the next one – a new rescue mission for the golden skiffia is already well under way.”

Biodiversity: The tale of the 'un-extinct' fish

By Victoria Gill
Science correspondent, BBC News
Published
18 hours ago



The Tequila fish grows no bigger than 7cm long

"It's just a little fish, not very colourful - there's not much interest in terms of global conservation," explains Gerardo Garcia.

The species that the Chester Zoo conservationist is talking about - the Tequila fish - has now been returned to the wild after being declared extinct.

"Missing" since 2003, it is back in the rivers of south-west Mexico.

The reintroduction is being held up as an example of how freshwater ecosystems and species can be saved.



The reintroduction site in Jalisco, south-west Mexico

Freshwater habitats are some of the most threatened on Earth, according to the **International Union for the Conservation of Nature** (IUCN), with freshwater-dependent species "going extinct more rapidly than terrestrial or marine wildlife".

- **Dragonflies disappearing as wetlands are lost**
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Threats including pollution continue to put pressure, not only on wildlife, but on clean water and food supplies that are dependent on rivers and lakes.

Crucially, the local community - people who live close to the Tequila fish release site in Jalisco, Mexico - are playing a key role, monitoring the water quality of the rivers and lakes.

Professor Omar Dominguez, from the Michoacana University of Mexico, whose team took a leading role in the reintroduction said: "We couldn't have done this without the local people - they're the ones doing the long-term conservation."