

Iconic Indian fish on the brink of extinction

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Humpback Mahseer

The legendary humpback Mahseer, one of the world's most iconic freshwater fish, is on the brink of extinction according to scientists from Bournemouth University in the UK and St. Albert's College in Kochi, India.

Ever since the publication of HS Thomas's A Rod in India in 1873, this giant member of the carp family has been known to anglers around the globe as 'one of the largest and hardest fighting [freshwater fish](#) in the world'. With its distribution having always been limited to South India's River Cauvery basin, this [fish](#) is now believed to be so endangered it may be extinct in the wild within a generation.

Adrian Pinder of Bournemouth University and Dr Rajeev Raghavan of St. Albert's College have been studying the ecology, taxonomy and conservation status of 17 species of mahseer which populate rivers throughout south and southeast Asia since 2010. Four of these species are already listed as 'Endangered' on the IUCN [International Union for Conservation of Nature] Red List. Along with co-author Dr Robert Britton, the paper, published in the international research journal Endangered Species Research, clearly demonstrates that the endemic humpbacked Mahseer is now of the brink of extinction having been replaced by non-native relatives (blue-finned Mahseer) which have been artificially bred and introduced to the river in the name of species conservation.

The paper acknowledges that many pressures are placed upon the fish of India's rivers, including pollution; poaching (using dynamite and poisons); sand and gravel extraction; low river flows due to abstraction; and India's continuing thirst for electricity, which has resulted in dozens of hydro-electric which restrict the ability of fish to migrate to their spawning grounds.

Against this backdrop of threats, this research suggests that the introduction of non-native Mahseer has acted as the catalyst which has had a catastrophic effect on the numbers of endemic Mahseer remaining in the River Cauvery and its tributaries.

Adrian Pinder said, "This research all stems from my interest as an

angler, when as a boy I had read about this great fish. In 2010 I made my first trip the River Cauvery, where I realised the fish I was catching did not match the appearance of the iconic specimens I'd seen in historic photos.

"On returning to the UK, I interrogated the scientific literature and made contact with Dr Rajeev Raghavan based at St Albert's College Kochi, to ask his opinion. Comparing photographs over the internet opened a can of worms and confirmed that very little was known about all of the Mahseer species found throughout south and south East Asia.

"As large monsoonal rivers are extremely difficult to survey, and angling was banned in all protected areas in India in 2012, I started to look for alternative data sources and discovered that the Galibore Fishing Camp [one of three former angling camps in the Karnataka jungle] had kept detailed angler catch records. This not only allowed us to analyse the temporal trends in population size over the previous 15 years but also form a detailed understanding of how the type and species of Mahseer had changed over time."

In 2012 Adrian Pinder and Dr Raghavan set up the Mahseer Trust, an NGO working to protect Mahseer and its habitats. The Trust is now working with national and international stakeholders to educate and promote better informed fisheries management practices and to save the humpback Mahseer from extinction.

Adrian Pinder concluded, "The blue-finned Mahseer, is not native to the River Cauvery, yet our studies over the last two years have shown that they are now one of the most abundant fish in the river. Without a doubt, their success has been at the expense of the humpbacked Mahseer that historically occurred throughout the entire river catchment. Despite the positive intention of conservationists, this is clearly a conservation programme which has backfired. The state of confusion surrounding

Mahseer taxonomy means the humpback Mahseer currently lacks a valid scientific name and could potentially go extinct before being named!"

"My current priority is on sourcing specimens of the endemic humpbacked Mahseer. If we are not already too late, obtaining DNA from this animal will allow us to name the fish and, based on our data, get it classified as 'Critically endangered' on the IUCN Red List. When you consider that the iconic Giant panda and tiger are classified as 'endangered' this puts things in context and demonstrates the urgency to act in sourcing native fish for culturing in local hatcheries."

More information: "The legendary hump-backed mahseer Torsp. of India's River Cauvery: an endemic fish swimming towards extinction?" *Endangered Species Research* [DOI: 10.3354/esr00673](https://doi.org/10.3354/esr00673)

Provided by Bournemouth University

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