

Fourteen years after the Gulf of Mexico oil spill, endemic fishes face an uncertain future

April 18 2024



Lead author Prosanta Chakrabarty in the fish collections of the Louisiana State University Museum of Natural Science where many specimens from the Gulf of Mexico are housed. Credit: Eddy Perez, LSU

The 2010 Gulf of Mexico Deepwater Horizon was the largest accidental

oil spill in history. With almost 100 million gallons (379 million liters) of oil combined with dispersants suggested to remain in the Gulf, it is one of the worst pollution events ever. More than a decade later, its long-term effects are still not fully understood.

[In a new study](#), researchers from Louisiana State University and Tulane University examined the endemic Gulf of Mexico fish species that may have been most impacted by the oil spill to see how their distribution has changed over the years. To get their data, they studied museum specimens from natural history collections, looked at relevant literature, and combed biodiversity databases.

With 1541 fish species known from the region, and 78 endemic fish species, the Gulf of Mexico is one of the most biologically rich and resilient marine environments in the world, but how much of this diversity is still left intact?

The study found that 29 out of the Gulf's 78 endemic [fish species](#) haven't been reported in museum collections since 2010. The Yucatan killifish, for example, which is considered [endangered](#), was last reported pre-spill, in 2005, off the Yucatán Peninsula.

Six of the non-reported species are considered of greatest concern, because their areas of distribution largely overlap with the affected area—although the authors note that their absence in the Gulf in recent years cannot automatically be attributed to the oil spill.



Jars of voucher specimens of fishes at the Louisiana State University Museum of Natural Science. Credit: Eddy Perez, LSU

"Understanding the impacts of catastrophic environmental events such as the 2010 Gulf of Mexico Oil Spill does not end when the wellhead is capped or when the last drops of oil cease to flow. The disaster only begins to end when the data no longer show impacts of the event.

"We are far from the beginning of the end for the Deepwater Horizon Oil Spill. Lingering chemicals, lost generations of wildlife and a continued ecosystem imbalance may all be factors that prevent an environment from rebounding from such cataclysmic events," the authors note in their research article.

However, they also point out that nature's ability to recover should not be overlooked.

"The Gulf of Mexico continues to face many challenges, from the Dead Zone, to [climate change](#), loss of coast habitats and continued oil spills. Efforts like this report aim to bring attention to [vulnerable species](#) that continue to be impacted by human activities and to the unique endemic fauna of the region," the researchers write in conclusion.

More information: Prosanta Chakrabarty et al, Ten years later: An update on the status of collections of endemic Gulf of Mexico fishes put at risk by the 2010 Oil Spill, *Biodiversity Data Journal* (2024). [DOI: 10.3897/BDJ.12.e113399](#)

Provided by Pensoft Publishers

Citation: Fourteen years after the Gulf of Mexico oil spill, endemic fishes face an uncertain future (2024, April 18) retrieved 2 May 2024 from <https://phys.org/news/2024-04-fourteen-years-gulf-mexico-oil.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.