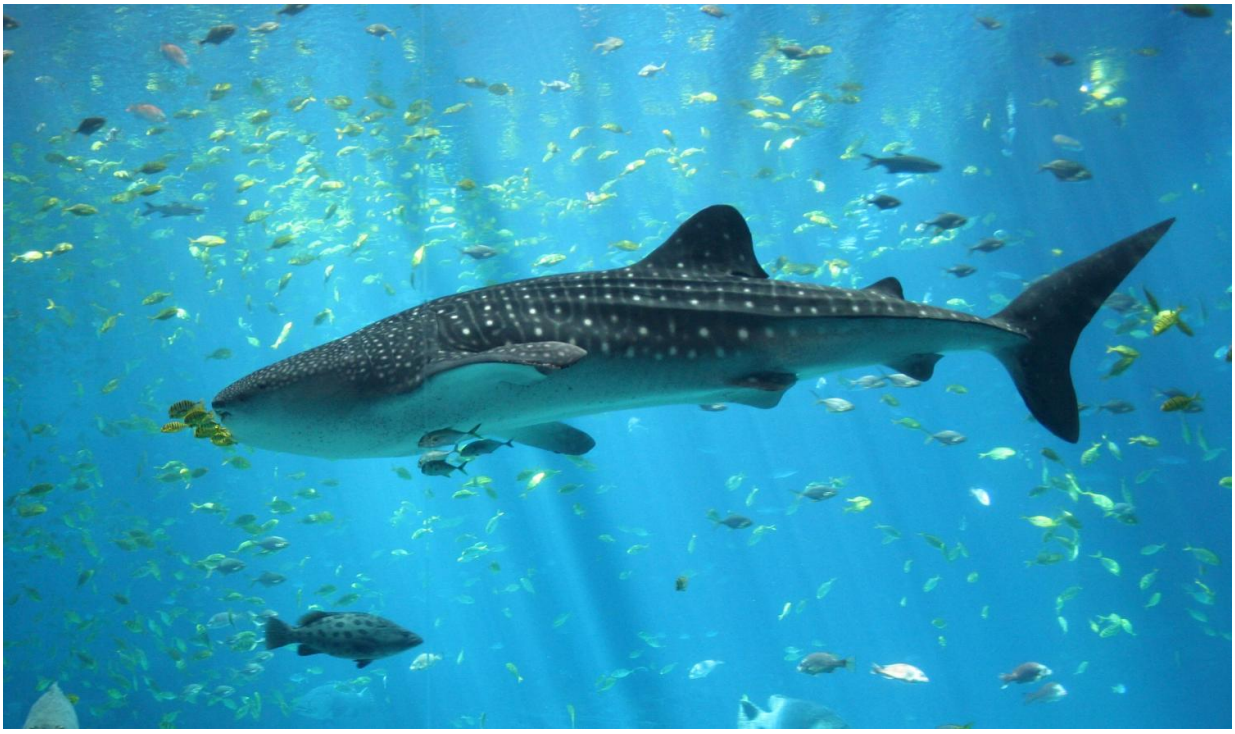
Study shows endangered sharks, rays further threatened by global food markets

August 25 2017



Credit: Zac Wolf/Wikipedia

A majority of shark fins and manta ray gills sold around the globe for traditional medicines come from endangered species, a University of Guelph study has revealed.

Using cutting-edge DNA barcoding technology, researchers found 71

per cent of dried fins and gills collected from markets and stores came from species listed as at-risk and therefore banned from international trade.

"Despite the controversy around shark fin soup and the fact that many of these species are threatened there is still a large market for shark fins and a growing demand for ray gill plates," said Dirk Steinke, integrative biology professor and member of the Centre for Biodiversity Genomics. "It's an area that until now has been hard to enforce because shark fins are dried and processed before they are sold making it difficult to identify the species."

Shark finning, or removing fins from live sharks, is illegal in Canada. Importing shark fins for sale is also illegal for species at-risk.

Published in *Scientific Reports*, the study was conducted with researchers from the Guy Harvey Research Institute and Save Our Seas Shark Research Centre at Nova Southeastern University in Florida.

Researchers collected 129 market samples in Canada, China and Sri Lanka representing 20 shark and ray species. Twelve of those species, including whale sharks, are listed as protected and illegal to trade under the Convention on International Trade in Endangered Species (CITES).

"We were surprised to find whale shark fins and gills were being sold," said Steinke. "This magnificent animal has been on the CITES Appendices since 2003."

Developed at U of G, DNA barcoding allows scientists to identify species of organisms using genetic material.

"DNA barcoding is an ideal tool when identifying dried samples or samples that have been processed," said Steinke. "It provides

enforcement agencies with a method for detecting whether the fins and gills that are being sold are legal or illegal imported species."

About half of the world's 1,200 species of sharks and rays are listed as threatened by the International Union for Conservation of Nature including 20 that may not be traded internationally.

"This study has shown that DNA barcoding can be a method to help prevent protected species from hitting the market."

Provided by University of Guelph