

NSU's Guy Harvey Research Institute Makes National Headlines with Ground-breaking Study



(L to R) Demian Chapman, Ph.D. student, GHRI and Oceanographic Center; Mahmood Shivji, Ph.D., Director, the Guy Harvey Research Institute, Oceanographic Center; Ramon Bonfil, Ph.D., Scientist, Wildlife Conservation Society; James Cassin, Special agent, NOAA Office of Law Enforcement holding shark fins confiscated from a major seafood dealer by law enforcement agents.

Law enforcement agents are using a genetic test developed at NSU's Guy Harvey Research Institute (GHRI) to identify fins and other products from the highly protected Great White Shark, according to an article published in the January issue of the journal Conservation Genetics.

The study, " Genetic profiling reveals illegal international trade in fins of the great white shark, *Carcharodon carcharias*," was co-authored by Mahmood S. Shivji, Ph.D., GHRI director and a professor at NSU's Oceanographic Center. The research has also been widely publicized in regional and national media, including the South Florida Sun-Sentinel, the Miami Herald and the Washington Post. Additionally, the story appeared on Miami's WFOR-CBS 4 and the West Palm Beach-based NPR affiliate WXEL Radio.

Resembling the story line of a prime time plot, in late 2003 agents from the National Oceanic and Atmospheric Administration confiscated approximately one ton of dried shark fins intended for export to Asian markets from a US East Coast seafood dealer. One of the confiscated sacks was labeled "porbeagle," a close cousin of the Great White Shark, but a label concealed inside read "blanco," which is Spanish for "white."

With the help of the agents, GHRI scientists took small samples from each of the 21 sets of fins for DNA analysis using a novel, rapid method utilizing both nuclear and mitochondrial markers.

Using the forensic assay they developed earlier, Shivji and his graduate students have found white shark species-specific primers that generate a distinctive pair of amplicons, which are unique to white sharks, in their small lab at the mouth of busy Port Everglades just south of Fort Lauderdale.

Shivji prepared the article with Demian D. Chapman of the GHRI, Ellen K. Pikitch of the Pew Institute for Ocean Science at the University of Miami and Paul W. Raymond of the National Oceanic and Atmospheric Administration Office of Law Enforcement .

GHRI was established in 1999 as a collaboration between the renowned marine artist Dr. Guy Harvey and NSU's Oceanographic Center to assume a leadership role in providing the scientific information necessary to understand and save the world's fish resources and biodiversity from drastic, ongoing declines. GHRI is one of only a handful of private organizations dedicated exclusively to expanding the scientific knowledge base needed for effective conservation of fish populations and maintenance of fish biodiversity. For more information, visit www.nova.edu/ocean/ghri.

In 2003, the Pew Charitable Trusts partnered with the University of Miami Rosenstiel School of Marine and Atmospheric Science to provide a generous, multi-year grant and founded the Pew Institute for Ocean Science, which undertakes, sponsors, and promotes world-class scientific activity aimed at protecting the world's oceans and the species that inhabit them. The scientific role of the institute is to increase public understanding of the causes and the consequences of problems affecting the marine environment. The conservation role is to promote solutions to these problems. For more information, visit www.pewoceanscience.org.