

Dive Life

The Shark Detective

WHEN NOAA NEEDS HELP INVESTIGATING ILLEGAL FISHING CASES, THE GO-TO GUY IS DR. MAHMOOD SHIVJI BY DARYL CARSON

CAN YOU IDENTIFY THESE TISSUE SAMPLES, Dr. Shivji? We think they're from a protected species."

That's the kind of call that's common for Dr. Mahmood Shivji, director of the Guy Harvey Research Institute at Nova Southeastern University in Dania Beach, Florida. Shivji has pioneered a process for identifying sharks using DNA markers — late last year the technology showed that some fins in the Hong Kong fin trade originated from endangered scalloped hammerhead populations in the western Atlantic. It's now routinely used to assist NOAA's Office for Law Enforcement to investigate and prosecute illegal fishing cases.

As a diver and a pioneering scientist in shark DNA, Shivji is at the forefront of conservation efforts for many shark, billfish and reef fish species.

He dives frequently as part of research projects — tracking shark movements is the most recent. It's the kind of life that inspires novelists to create modern action heroes — the ones who save the world, get the girl and do it all in an ecologically sensitive manner.

SURREAL, AND THRILLING

Certified in 1976, Shivji became interested in a career in marine biology after he began diving in British Columbia, where he has logged his largest number of dives — more than 600 — doing research on giant kelp ecology. The area was the scene of one of his most memorable underwater experiences.

"It was the summer of 1978, and we took a day off from our research to dive a wreck off the west coast of Vancouver Island," says Shivji. "As soon as we entered the water, we were surrounded by hundreds of dogfish sharks as we descended.



Dr. Mahmood Shivji; a blue shark is released after being tagged.

The sharks would come within a few inches or often bump into me before turning away. It was surreal but also thrilling to descend through a virtual 'cloud' of small sharks."

That dive was only a token of what was to come in studying shark species. In addition to the current shark-tracking studies,

Shivji spent time last year at Tiger Beach in the Bahamas with artist and conservationist Guy Harvey. "It's just remarkable how close you can get to the tiger, lemon and Caribbean reefs sharks at this site," Shivji says.

WORKING FOR THE FUTURE

Shivji sees the research at the institute, where he has served for 10 years, as essential for the future health of the oceans. "All of the research done through GHRI is important, but the efforts related to shark species are essential. As apex predators, sharks are an integral part of their ecosystems, and as pelagic hunters, they have wide ranges, sometimes migrating across whole oceans. This makes sharks critical to the health of the oceans but also a challenge to assess and manage. Understanding how sharks 'work' is immensely important for preventing their extermination through lack of proper management."