

EXPEDITION PROFILE

March 21-26, 2018 aboard DISCOVERY Yacht Archimedes

The International SeaKeepers Society partnered with the Florida International University's Dr. Mark Bond and Global FinPrint to collect video footage of shark populations off the southern coast of Antigua as part of an ongoing study in the region.

As an area recently devastated by Hurricanes Irma and Maria in 2017, data collected so recently post-storm and comparing it to pre-hurricane data already collected in that region is incredibly valuable to the project. The researchers place underwater video cameras on the sea floor with a small bait cage sitting in front, a setup called a "BRUV": Baited Remote Underwater Video. Sharks or rays in the area will swim toward the smell and appear on film (90-minute recording segments) and be counted when the researchers replay the video. Just as mammal biologists use camera traps to get a sense of how many tigers or snow leopards there are in a particular location, the researchers will estimate how many sharks visit each BRUV, as well as rays and other marine life.

On average, about 9 BRUV units were dropped into the ocean each day at predetermined sites along the southern coast. Sites were chosen based on reef structure and depth, both of which were factors in determining the likely-hood of capturing sharks on camera. Data such as date, time, site location, exact coordinates of each drop, and weather conditions are recorded as well to determine if and how those data points can factor in as well. One thing that was unique about this expedition is that several crew members of the Archimedes were trained on how to deploy BRUV units on their own so that they could act as citizen scientists on future travels. Early analysis of the footage showed eight sharks from two different species (Nurse sharks and Caribbean Reef sharks).

Sharks are believed to head to deeper water during storms and will return to shallower habitats when the storm has passed. In rare instances a shark may be caught unaware by a storm surge and become beached. The populations would generally be unaffected by the storm itself. However scientists are currently trying to understand the long-term impacts of overall reef degradation from increased storm activity from climate change. This was a great opportunity, not only to collect and observe these organisms in their natural environment, but also to teach non-scientists about how they can be active participants in the collection of such data.

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