

## The Effect of Contrast on Approach Distances of *Carcharhinus perezii*

**Authors :** Elizabeth Farquhar, Erich Ritter

**Abstract :** Studying shark's interaction with humans and their behavioral responses will have enormous implications for other fields of marine biology and oceanography. The health of sharks has direct impacts on the stability of human society with a reported 3.5 billion people depending on the ocean for food and/or livelihood. Discovering how sharks behave and interact with people, will have enormous implications for future studies, along with the development of more effective ways to reduce negative shark/human interactions. This specific study investigates the effects of contrasting ponchos worn by divers on the approach distances of *Carcharhinus perezii*. Data was collected over a two week period at a test site off the shore of Eleuthera Island in the Bahamas, with a depth of approximately 55 feet during mid-August. Sixty-minute dive trials were conducted and videoed from above with 5-meter radius markers on the ocean floor surrounding the two divers, kneeling back-to-back. Five poncho colors were worn by the two divers (black, navy blue, dark green, yellow and orange), rotating the color permutations randomly to test the distance a shark will approach each color. Results indicate significantly closer approach patterns when divers were wearing orange ponchos, and the combination of orange with black and blue ponchos were found to be statistically significant. These results are relevant to understanding how sharks perceive contrast and dive equipment in the marine environment, which could have the potential to prevent negative shark/human interactions.

**Keywords :** shark behavior, animal behavior, marine biology, conservation

**Conference Title :** ICABE 2020 : International Conference on Applied Biology and Ecology

**Conference Location :** New York, United States

**Conference Dates :** January 30-31, 2020