



EXPEDITION PROFILE

2019 Sampling Season aboard DISCOVERY Yacht Pritnear Heaven

The International SeaKeepers Society has teamed up with Dr. James Sulikowski of the Shark and Fish Conservation Lab at Arizona State University. The team is using a multifaceted approach to find and collect reproductive and habitat data on porbeagle sharks in order to improve the recovery of and management of the species in the Gulf of Maine. This approach will: 1) Provide post-release mortality estimates for this species in the commercial and recreational tuna fishery and 2) Provide update/new distribution and habitat utilization information based on life stage and reproductive status. Our study design will follow the methodologies outlined below.

Juvenile spatial ecology: The spatial distribution of juvenile and young-of-the-year (YOY) porbeagle sharks will be investigated using fin mounted satellite tags to determine 'hotspots' (i.e., areas with high fishery interactions) in the Gulf of Maine. From this information, practical bycatch avoidance strategies can be developed that will help reduce fishery interactions and overall mortality rates on the most vulnerable YOY and juvenile porbeagle sharks.

Linking spatial ecology to reproductive biology: We will use fin mounted satellite tag technology and link it to noninvasive reproductive methods (ultrasound and blood chemistry) to determine when and where females migrate by reproductive stage and elucidate where birth occurs through the use of a novel birthing tag.

Post release mortality: We will use standard fishing practices in the recreational and commercial rod and reel tuna fishery to investigate the mortality of porbeagles associate with capture in this gear as well as develop best handling techniques for captured sharks. Sharks captured with this gear will be tagged with pop-off satellite archival tags set with a 28 day data recording period.

The research team consisted of Dr. Sulikowski and masters students Hannah Verkamp, Brooke Anderson, and undergraduate students Ben LaFreniere, Jasmine Nyce and Kristen Wurst. This season, a total of nine trips were conducted with Captain Dave Johnson aboard the fishing vessel Pritnear Heaven. Those dates were: 6/7/19, 6/24/19, 7/8/19, 7/20/19, 8/11/2019, 9/28/2019, 9/29/2019, 9/30/ 2019, 10/2/ 2019.

Long and hard days out on the water were rewarded by the exemplary hospitality and helpfulness of Captain Johnson as 11 porbeagle sharks have been captured and released (1 fin mount and 10 popoff tags have been deployed; one shark was double tagged). The expeditions thus far have been a complete success, due in no small part to the unfailing determination and work ethic displayed by the Captain, research team, and generous support of SeaKeepers.

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