

Bimini's Great Hammerheads

by Albert Kok

Bimini is the westernmost of the islands of the Bahamas, located just at the edge of the great Gulfstream at 53 miles east of Miami. It actually sits on the western edge of the Great Bahama Bank. It has two large islands: South and North island. A large mangrove swamp covers the Northern island.

Bimini's reputation is not only based on its popularity for big-game fishing but also because it is the home base of the famous Shark Lab, founded in 1990 by Samuel ('Doc') Gruber. The Shark Lab has an unique research program including experiments on baby lemon sharks held in captivity, shark 'personality', biotelemetry and 'tagging' of great hammerheads for their identification. At present around 20 great hammerheads have been tagged, which has provided a wealth of information such as their locations in the waters surrounding Bimini, and on their longer migratory routes to the East Coast of the US when sea water temperature on Bimini is rising during the summer.

Early this year in January I had the opportunity to visit the great hammerheads of Bimini; a shark that I had missed on my earlier trips to Tiger Beach, which is not so far from Bimini. There are several dive operators at Bimini. I selected the Neil Watson Jr Scuba Center located at the Bimini Sand Resort and Marina (South island), because of their reputation as shark experts and advocates for protecting Bimini's underwater world. Neil works with Grant Johnson and Katie Grudecki on the



Olympus EPL5, Panasonic 8mm, Magic Filter, F13, 1/80 ISO 200

shark trips. Grant is a former director of the Sharks Lab who is now Activity Director of Bimini Sands Resort. According to Grant the presence of great hammerheads at Bimini is because they are 'passing through' on their way to their favorite hunting grounds which are the vast flat and sandy sea floors

that are loaded with their favorite food: stingrays and eagle rays. Their preference for shallow sandy bottoms makes it also easy for Neil and Grant to bait them in.

There have been many speculations about the function of the odd shaped head of the great



Nikon D7100, Tokina 10-17, 10mm, Ikelite housing, Ikelite D125 strobes, 1/2 power, F16, 1/125, ISO 200

hammerhead (Sphyrna Mokarran, derived from the word hammer in old Greek). One idea is that the flat shape allows the shark to make rapid lateral turns of the head to catch its prey and pin it down to the floor.

The flat head also works like a 'hydrofoil', just like the wings that give a boat or a plane a vertical lift. Also important are the distant lateral positions of the eyes, ears and the electro-sensors (the Lorenzini pores). Experts now agree that this increases the effective size of the sensory fields. By swinging its heads in broad angles over the sea floor, the

hammerhead is able to detect even prey that is hidden under the sand. So, most likely the hammer shape is a refined evolutionary adaptation to the hammerheads habitat, being mainly sandy bottoms hiding crabs, crustaceans and rays.

The baiting during the dives is carried out in a relaxed and disciplined way. A metal box drilled with holes and filled with pieces of fish is lowered from the boat, moored on the sandy floor at a depth of around 30 feet or less. Small pieces of fish are taken out of the 'goody box' by Neil or Grant, and thrown in the water to



The diving boat of Scuba Adventures. Diving gear can be rented. Groups normally consist of 6 to 10 persons.

attract the sharks.

After a while three or more hammerheads appear and start circling the bait box; often surrounded by a swarm of nurse sharks searching for the left overs. Later in the season (around February) bull sharks may also move into the bait area and mix up with the hammerheads. During the two tank dives that may last as long as ninety minutes per dive, the divers are lined up on their knees on the sand, at positions left and right sides of the bait box.

On calm sunny days the water is blue and crystal clear, but in

windy conditions there can be some turbulence that spreads fine sand particles and reduces the visibility.

My gear consisted of a Nikon D7100, Ikelite housing and D125 strobes. I always used the Tokina 10-17 and a Precision 5" dome. On some dives I also took the Olympus EPL5 with me, equipped with the Panasonic 8mm lens, Magic Filter and 4" Precision dome, for ambient light shots.

When I brought two cameras down, I left one on the bottom, hoping that a hammerhead would not snatch it away, like tiger



Nikon D7100, Tokina 10-17, 11mm, kelite housing, Ikelite strobes 1/2 power, F16, 1/125, ISO 200

sharks sometimes do. Shooting the hammerheads was relatively easy, although it was sometimes difficult to keep other divers out of your frame for a clean hammerhead shot. I had visualized before the dive the kind of exposures I wanted to make. A close-up of the side of head with its miraculous bright black eye, or a frontal shot of the shark turning towards me, showing not only its head, open mouth and hammer, but also its body with the majestic dorsal

fin. The hammerhead swims with its mouth slightly open, exposing its rows of razor sharp teeth and creating the impression that it is laughing. My best shots were those when the sharks moved in really close, say around 50 cm distance. The ambient light shots taken with the Oly/Pana combo and filter had nice warm colours, but lacked the sharpness of the Nikon/Tokina combo taken with flash, especially of the sharks head and eyes. In total, I took around 400 exposures



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Young mangroves at low tide, Southern Bimini island.

The great mangrove forest on North Island can only be visited by boat. There is a serious concern that developments in the tourist industry. In particular the recent construction of a cruise ship terminal on Biminis western shore, could threaten the condition of reefs and mangroves on Northern Bimini Island.



