



Despite their threatening appearance, most sharks, like this lemon shark, prefer to eat fish not humans.



Shark frenzy

A globe-trotting MD shares his close encounters with this beautiful and fast-disappearing predator

BY Dr Brad Bowins

One of the most exciting aspects of being a scuba diver is the chance to dive with sharks. Frequently cast as villains, these magnificent creatures are timid and placid when compared to some animals commonly perceived as cute, like polar bears. While I have photographed sharks close-up without the protection of a cage, I would never do that with a polar bear.

This majestic whale shark was photographed by Dr Bowins near Phuket, Thailand.

BRAD BOWINS



Despite their image as perfect attack machines, these visually striking predators can actually be very difficult to encounter as a scuba diver. In fact, most prefer to avoid humans. So it's necessary to participate in a shark-feeding dive where they're enticed with bait or travel to a location where sharks congregate. Luckily, sharks just happen to congregate in some of the most exotic locales on the planet.

WHERE SHARKS ROAM

Remote Cocos Island lies 450 kilometres off Costa Rica and can only be accessed by live-aboard dive boat. Several years ago, I made this journey aboard the **Okeanos Aggressor** (tel: 800-348-2628; www.aggressor.com).

Jutting out of the Pacific, Cocos is the only landmass in the region, so turtles, rays, pelagic fish, dolphins and sharks are all drawn to it. Given the large banquet of fish, white-tip sharks are permanent residents. By day, they typically rest, often allowing divers to pass right over them. At night, they zip around seeking out fish hiding in corals and rocks.

Possessing flexible cartilage skeletons like rays and skates, sharks move through the water with a casualness and grace as riveting as their appearance. With blunt heads ideally designed for grabbing smaller fish from crevices, they twist and pull their prey from hiding places.

More magical and mesmerizing were the schooling hammerhead sharks that Cocos is renowned for. This species has heads stretched out with eyes at the sides. The flat profile helps with lift while swim-

ming, much like an airplane wing, and also allows them to detect and trap rays buried in the sand.

Descending to 30 metres, we came upon a couple hundred hammerheads seemingly flying in formation. With only a slight current, the sharks kept their distance, but with stronger currents they approached within 10 metres, passing as if on parade.

Hammerheads are also found in the Galápagos, but when I went, we didn't encounter huge schools of them. More abundant were the Galápagos sharks, fuller-bodied versions of the grey shark found throughout the Pacific. At one point, I was so absorbed in photographing one, I looked up to discover that I was alone in the middle of about 20 of them circling. They tolerated my presence and I departed without incident.

SHARK-FIN MAFIA

Sharks should perhaps consider attacking humans — given what we're doing to them. The "shark-fin mafia" is systematically ridding the oceans of sharks to service a lucrative shark-fin soup industry. Millions of sharks are having their fins cut off and their bodies discarded to die a slow painful death.

The plight of sharks was well documented by Canadian Rob Stewart in his award-winning 2007 documentary *Sharkwater*. Stuart filmed hundreds of hammerheads dying on long-lines. In 2003, a confiscated fishing boat contained the fins of an estimated 30,000 sharks.

Sharks are like mammals in that they are slow to reproduce, with several years before reproductive

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maturity, long gestation periods and relatively small litters. Given that most bony fish capable of much faster reproduction are unable to tolerate modern-day harvesting practices, sharks really don't have chance. It has been estimated that perhaps 95 percent have been eradicated.

A 2009 report of scuba diving at Cocos Island indicated that there were more hammerhead sharks found dead on abandoned long-lines than there were swimming — a far cry from the wall of sharks I encountered. And on my Galápagos trip, we had to travel to the remote Wolf and Darwin Islands, 14 hours away from the main islands, as too few sharks remained elsewhere.

WHALE TALES

Richelieu Rock near Phuket, Thailand is perhaps the most promising site for finding the largest of sharks, the whale shark. The best way to envision one of these breathtaking creatures is to picture a bus-sized fish with iridescent blue spots against a dark background, swimming slowly and gracefully. In March and April, massive plankton swells attract whale sharks that feed on small fish and plankton. Given the very small fry on their menu, humans are never attacked.

A few years after I visited this location, they were seen in fewer numbers, once again victims of the “shark-fin mafia.” Pressure brought to bear to save these truly cute sharks has had some impact with the number of sightings increasing, although the average size is now closer to a mini-bus. Whale sharks also congregate at certain times of the year off the coast of Belize in the Caribbean, and Ningaloo Reef off the northwest coast of Australia where spotter planes help locate them for snorkellers.

JAWS OF DEATH

Of the numerous shark species worldwide, only a few are linked to attacks on humans. The great whites like those featured in *Jaws* have attacked people, most often surfers who look like seals from below.

Great whites are known to migrate thousands of kilometres to areas where seals congregate. South Africa is one such place and the south coast near the small town of Gansbaai is the epicentre. Visiting in September, I spent three days of diving inside a very small cage. Although these four- to six-metre sharks are numerous, they are not much interested in hu-

mans, so we had to chum with fish blood and bits. Fortunate to only have a couple of other divers aboard, I was able to spend a lot of time in the cage.

Because a *National Geographic* film crew had secured the better boat, the one used by **Shark Watch South Africa** (www.sharkwatchsa.com) had higher sides. So to get into the cage we had to climb over the side of the boat, stand with both feet balanced on either side of the cage, and then drop through the hole. Did I mention that this was while heavily weighted down and watching a few great whites circling? One slip and I would have been shark bait.



Dr Bowins hangs out with black-tip sharks in the Bahamas.

COURTESY BRAD BOWINS

The Bahamas are arguably the centre of shark-feeding dives in the world.



Brad Bowins is a psychiatrist working in private practice as well as at the University of Toronto Health Service. He began scuba diving when he was 15 and has completed over 1000 dives, most devoted to underwater photography. In addition to his Caribbean trips, he has explored the undersea riches of the Maldives, Egypt, the South Pacific and Southeast Asia.

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that I looked up to discover that I was alone
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Once immersed in cold water with these large predators circling, you quickly discover why without technology humans are definitely not at the top of the food chain. My impression of these top predators with both the look and teeth to back up their title is that they are cautious and strategic, circling and trying to approach in a discrete way. Only once did a shark rush the cage head on, but what power! My feet had been hooked under a bar to steady myself, but the impact still pushed me right back against the opposite side of the cage.

My host André, who has been featured in several documentaries on great whites, actually strokes them below the jaw when they surface beside the boat and raise their heads. When the visibility is very good, he will even swim outside of the cage only equipped with a non-firing spear gun. So much for the mindless aggressor image we have of these incredible sharks.

Great whites once congregating for the seal feast off South Australia, but they've been decimated by glory-seeking hunters. However, at Isla Guadalupe off the west coast of Mexico, **Shark Diver** (tel: 888-328-7449; www.sharkdiver.com; certified and experienced divers only) takes visitors where great whites can be lured by chum.

SAFE SWIMS

Less fear-inducing sharks are present around the world in tropical locales, but are too spread out and wary of humans to be sighted regularly. I have glimpsed Caribbean reef sharks or black-tips from a distance, but to experience these species on anything but a rare chance occurrence, it's necessary to feed them.

The Bahamas is arguably the centre of shark feeding in the world, where the shallow flats attract large numbers of sharks. To the credit of the government, most sharks are protected and appreciated as the basis of a multi-million-dollar tourist industry.

In the early days of organized shark dives, I went out with two scuba operations based near Nassau. **Stuart Cove** (tel: 800-879-9832; www.stuartcove.com) is now a highly polished facility providing shark experiences to scores of tourists; back then it was a little more basic.

One guide accompanied three of us in a small boat with dead baitfish in a box. Halfway through the dive in shallow water our guide realized he had not filled his tank, and used my backup regulator to breathe from. This gave me a shark's eye view of the feed as he lifted fish out of the box with a spear. After

he finished I took up the spear and fed a few sharks.

The experience with **Dive Dive Dive** (tel: 800-368-3483; www.bahamasgo.com/divedivedive.htm) was more polished but still unique. At a deeper site, we used a special gas mix called Nitrox to extend our bottom time. By staying somewhat off to the side I was able to take clear photographs of the sharks approaching and leaving. Occasionally, one came just a metre from me, providing a great head shot. But they always veered abruptly and returned to the feed.

A NEED TO FEED?

There is controversy around shark-feeding operations, some claiming that they are too dangerous. Others argue that it conditions sharks to approach all boats. From my extensive experience scuba diving, my take is that the risk is manageable with common sense.

For example, off the coast of Australia, I participated in a shark feed involving grey sharks that normally are not aggressive. The dive operators used a bait ball, and appreciating that sharks can become too frenzied and mistakenly attack a diver, they had the divers in cages. When the food ran out, we left the cages and swam with these now quite docile sharks.

On the environmental side, shark dives are infinitely better for sharks than shark-fin soup, and for the moment, these dives are the only viable economic incentive to keep them alive and thriving.

Some wonder why we need sharks in the first place. Top predators in the animal kingdom, while small in number, play a pivotal role in keeping the ecosystem healthy. A healthy reef environment is one where there are a large number of sharks and predatory fish, some medium to large sized fish and very few small fry.

Throughout the world, reefs are now characterized by the reverse profile of numerous small fish capable of escaping fishing nets, very few moderate-to large-sized fish, and often no large predators. Reefs have suffered as a result of this profile reversal, with many being overrun by algae, in part due to a lack of good-sized healthy herbivores.

While it is difficult to reverse detrimental environmental trends, in this instance, we can all do our part by not ordering shark-fin soup and writing letters to any restaurant serving it and asking that it be removed from the menu. With individual efforts of this type, shark populations can rebound as has happened with the majestic whale shark, and the health of the world's reefs will improve. ■