

WHITE AND BLUE OPEN-OCEAN WANDERERS



Divers relish sightings of oceanic whitetips in the Red Sea, or blues off the Azores or even Cornwall. **JAMIE WATTS** gets under the skin of these iconic sharks, with photos by **MALCOLM NOBBS**

IT CAME OUT of nowhere – out of the deep, infinite blue. One second there was nothing, then, gliding slowly and effortlessly just a few metres behind my shoulder, the shark.

Meatier than a reef shark, yet with those big, swept-back fins, dipped in white paint, it was somehow sleeker and more elegant.

It looked fast when it was almost standing still, and it cruised in for a closer look, clearly less afraid of me than any shark I'd seen before.

Individually these are not the biggest or most dramatic of the predatory sharks. On a global ecological scale, however, the oceanic whitetip and the blue are far, far more successful than the great white, tiger or bull shark.

These two among all the sharks have become supreme travellers, foraging effectively across vast areas of open ocean. They are the most successful sharks on Earth.

Smaller and less bulky than great whites, tigers and bulls, they are still pretty big animals. Females of both species can (occasionally) reach 3.5m long, perhaps more with the big female blues, and two to three times the weight of an adult human. The tropical oceanic whitetip is significantly stockier than the slender, coolwater blue shark.

Both mature around age five, at the

length of an adult human, and, if not taken for their fins, probably live 20 years or so. Both can have a litter of a dozen pups every year to 18 months (two dozen or more in the case of large blues).

Both are particularly sleek, with long, swept-back pectoral fins and long tails providing lift. They are built – superbly – to travel.



Above: Oceanic whitetip sharks.

Unlike other sharks they successfully move away from the continental shelves to forage in the sparse open oceans, often for concentrations of squid in moderately deep water. Their distribution ranges are vast.

Ex-king of the tropics

Oceanic whitetips are definitely the more tropical of the two, living in warm surface water of normally 24°C or more.

In *The Natural History of Sharks* of 1969, Thomas Lineaweaver and Richard Backus famously described them as “extraordinarily abundant, perhaps the most abundant large animal... over 100 pounds on the face of the Earth”.

Unfortunately, those big, flag-like fins and the (former) abundance of oceanic whitetips made them prime target for exploitation.

The high dollar value offered for fin cartilage for soup has been one of our more deplorable cultural and economic practices of recent decades. Oceanic whitetips are now far from abundant.

An irony of marine science and fisheries management is that often we can estimate how many of a marine species there used to be only when our catches plummet – when we’re already overfishing enough to drive their numbers down.

We can only make educated guesses about what the populations of these

sharks were in their heyday. We think we started fishing 30-50 million *carcharhinids* (the family that includes blues and whitetips plus warmwater reef sharks) each year in the 1970s and ’80s, but the numbers really started to plummet from the ’90s, when high sharkfin prices led to active targeting.

For the past 20-odd years estimates were as high as 100 million sharks a year.

A reasonable guess at the global population before we started exploiting heavily might be 50-75 million – far more than any seal or dolphin population, or any population of large land animals, apart from humans and our livestock.

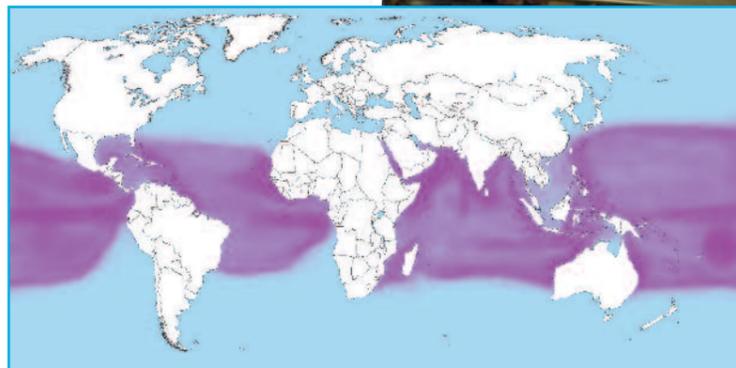
Over two decades from 1992, oceanic whitetip catch rates dropped by more than 90%. What’s left are dwindling fast.

Attempts to halt this trend have brought out an inspiring side of the marine and diving community. Graham



Above: Sharks fins on sale.

Left: Oceanic whitetip distribution.



Buckingham and the team at Bite-Back in the UK have gone to the retailers and restaurants; Michael Aw and Ocean Geographic in Singapore approach airlines and the distribution network there; Paul Watson and Sea Shepherd have gone high-profile in Costa Rica and elsewhere, and there are many more.

They have faced an uphill battle against a huge and lucrative industry, and there’s still a way to go. But without their efforts we would have had several extinctions and an even more dire hole ripped into our ocean food-webs.

It’s a fight they may win. Recently former basketball star Yao Ming has been the face of a campaign making inroads in China, the world’s main sharkfin market. The government agreed to stop ordering sharkfin for official functions, and Yao Ming has been credited with halving shark-fin demand. It’s getting there.

OCEANIC WHITETIPS LIVE IN a pretty much continuous belt around the tropics – they like it warm. Tropical seas are mostly food-poor, so they travel between areas of food concentrations, usually where reefs, seamounts or upwelling areas bring prey together.

They sometimes increase their foraging odds by following tuna, pilot whales or smaller dolphin species. Hotspots include the area between east Fiji and Tonga and, in spring, Cat Island in the Bahamas.

British divers know oceanic whitetips from the Red Sea, especially Elphinstone and other reefs in the central and south



Above: Blue shark.

from October to Christmas. Red Sea whitetips are in the north during the warmer months but head south when the north cools down in winter.

Their movements out of the Red Sea and into Yemen waters and the Somali upwelling system are poorly understood. These seas are hugely rich feeding grounds for the sharks, but also areas of intense fishing.

Are whitetips dangerous?

Photographers love oceanic whitetips. They are impressive, bold and curious (to the point of unnerving – I challenge any diver to avoid a raised pulse when one of these heavy-bodied beasts comes close to check you out).

They have also often been described as one of, if not the, most dangerous sharks. They are certainly opportunistic feeders and will investigate divers for – or as – possible food.

Malcolm’s photos were taken aboard Jim Abernathy’s *Shearwater* around the Bahamas. There was no feeding – closed milk-crates containing chum were lowered and the scent attracted the sharks.

The dives were conducted in blue water, the crates tied to a float with sharks and divers drifting in the current.

“The first encounter with any species is always special and I was very excited,” says Malcolm. “Stupidly I got carried away and got too close to the crates. Jim was quick to tell me off.”

In 2010 in the northern Red Sea an oceanic whitetip killed a snorkeller, and several more were maimed.

However, these attacks occurred where sharks had been drawn into the shallows by food, and with people paddling at the edge of deep water.

Oceanic whitetips’ reputation as killers comes from two infamous, horrific events from WW2. British troop-carrier RMS *Nova Scotia* was torpedoed off South Africa’s Natal coast in 1942 and 858 people died in 36 hours. Most were

prisoners of war who didn’t get into the single lifeboat the ship managed to launch and clinging instead to wreckage.

Some drowned, but most deaths were attributed to oceanic whitetip attack.

Three years later the fast attack cruiser USS *Indianapolis* was sunk between Guam and the Philippines, and nearly 600 sailors who went into the water died over the next four days.

Oceanic whitetips were seen attacking and killing some, and all these deaths were attributed to this species. Robert Shaw’s character Quint memorably described the horror of the Indianapolis event in *Jaws*.

These numbers of deaths far exceed the number attributed to any other shark species – four or five times more people than have ever been killed by great whites.

This opportunistic scavenger will

investigate any potential food source up to the size of injured or dead whales.

The *Nova Scotia* and *Indianapolis* situations, with hundreds of people in the water for an extended period clinging to wreckage, were extremely unusual, and from the sharks’ perspective an important foraging opportunity.

It’s extremely rare for humans to become a scavengeable prey item – part of the food-web instead of sitting above it – but that’s what we were on these occasions.

Those incidents aside, oceanic whitetips have been recorded attacking fewer than a dozen people. Millions of these sharks are killed each year for their fins, so if it comes to human v whitetip the statistics are about a million to one in your favour.

Sleek and cool blues

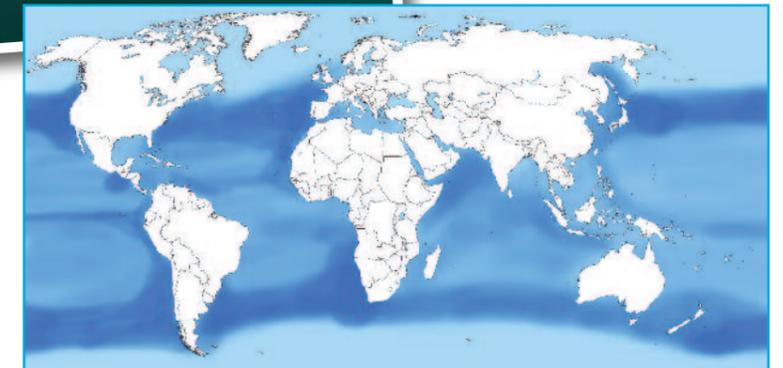
It’s unlikely that Lineaweaver & Backus were right about the oceanic whitetip being the most abundant large animal on Earth. Another large shark was once more abundant than any other large marine animal, though some dolphin and seal populations have since overtaken it. This is the blue, the widest-ranging shark of all.

Almost every shark is a variation of yellowish/brownish grey, but the blue is the spectacularly well-named exception.

It’s capital blue with an exclamation mark – a vivid, glowing, electric, slightly purplish-blue. Malcolm describes it as a



Right: Blue shark distribution.



“shimmering, metallic blue”. The long, slender, elegant form so coloured makes for arguably the most beautiful of all sharks.

You usually have to travel a bit to find blues, and to be baiting. Malcolm's photos were taken about 20 miles off Penzance, Cornwall, and in the Algulhas current 30 miles south of the Cape of Good Hope.

Chum can be smelly and there can be a lot of bobbing around on the boats, so these are not trips for the weak of stomach. Preparations for baiting included putting a mat on the side of the RIB to reduce the risk of a shark-bite deflating it.

Where divers regularly interact with blues they are young animals, shy until brought in with chum, and according to Malcolm “occasionally took little nips at inattentive divers”.

These slim, relatively small-mouthed young sharks are considerably less threatening than their stocky whitetipped cousins. Big adults rarely venture where divers are likely to be.

Blues are more tolerant of cool water than any other large, open-ocean, wide-ranging shark. Preferred temperatures of 13-20°C give them access to the rich food resources of temperate seas.

UNLIKE MAKOS, PORBEAGLES and great whites, warm-blooded enough to push into these rich, cool waters, blues keep their metabolisms slow and remain cool-blooded. Their calorie and oxygen needs are therefore far lower than those of their stocky, hot-blooded cousins.

Key to blues' success are the repetitive cold, deep dives, often to several hundred metres, made into waters where few other large sharks could tolerate either the temperature or the low oxygen levels.

They are caught as bycatch on swordfish fisheries. Like the swordfish, they move through the boundaries between warm- and coldwater masses,



Above: Filming an oceanic whitetip shark.

where small squid and fish concentrate.

Foraging from moderately warm surface seas to cold depths is closer to the behaviour of sperm whales than to that of other sharks.

Like sperm whales they can access large reserves of deep, temperate-water prey – squid particularly – that few big predators can reach. Like sperm whales, this allowed them to become globally abundant.

Young blues in the north-east Atlantic seem to spread out and northwards across the temperate north Atlantic as spring turns to summer and warms and feeds these seas. As they mature, they spread from a nursery area off Portugal and the Bay of Biscay and out to the Azores.

In the UK we get mainly female sharks in the early season, with some smaller males arriving later in summer. A few spread as far as southern Norway at summer's height.

Late in autumn they head offshore and into deep water closer to the tropics, where they seem to like staying in the cooler waters and deeper, below the warm surface seas.

This may be an energy-saving strategy – keeping the body cool and metabolism slow lowers food and oxygen needs.

Large adults seem to live deeper, beneath tropical seas. The females appear to prefer the upwelling area off the Canaries and north-west Africa, while the males head further west towards the

Caribbean, perhaps doing loops of the north Atlantic via the Gulfstream. The genders meet to breed in spring, before their big feeding season.

The females seem to give birth close to the Equator. Most sharks move within a range of a few hundreds of kilometres a year but occasionally they cross the oceans, covering thousands of kilometres.

Even more occasionally a shark will move between the northern- and southern-hemisphere populations.

South Atlantic blues appear to migrate around the circuit between the rich shelves of Uruguay and Argentina to the west and South Africa and Namibia to the east, with mating off Brazil and Uruguay and nursery areas off South Africa.

Indian Ocean and Pacific populations have their own migration routes and hotspot areas. Blues are everywhere, from south of Africa to Australia to north of Japan and Canada.

AS WITH OCEANIC WHITETIPS, this abundance attracted the attention of fishermen. Perhaps a quarter of sharkfins found in Hong Kong markets comes from at least 12 million blue sharks a year, and fisheries' catch statistics usually show two to four times as many blues as oceanic whitetips being caught.

There may have been 200 million adult and near-adult blue sharks roaming the oceans a decade or two ago, but intensive finning since the early 1990s has reduced this to a tiny fraction of these numbers.

Both of these magnificent species are natural successes on a huge scale. The plummeting of the populations has been scary but I'm optimistic about their ecological resilience, and suspect that they will be able to recover.

The caveat is us stopping – completely and globally – fishing for sharks. It's possible, and both these species are more than happy to be feeding nowhere near where we need to be, and just occasionally checking us out in passing.

So maybe I can look forward to being just a little spooked by a big bold oceanic whitetip, or getting another close pass from an electric blue. ▣

Below: Fishing for blue sharks.

