

Oceanic blacktip sharks are one of seven species of sharks that can be found at Protea Banks in South Africa.

Text by Don Silcock Photos by Don Silcock and Filippo Bhorgi

The Protea Banks enjoys a reputation as one of the best places in South Africa to dive with sharks, and depending on the time of year, you can see up to seven different varieties, including ragged-tooth sharks, oceanic blacktip sharks, bull sharks, tiger sharks and three varieties of hammerhead sharks—scalloped, smooth and great hammerhead sharks. Often, these varieties are in large, if not astonishing, numbers.

There is a reason for the abundant life in the region. Often described as the African equivalent of the Gulf Stream and as one of the world's most powerful oceanic currents—one that moves almost

70 million tons of water a second—the Agulhas Current forms to the southwest of the huge island of Madagascar, when the powerful Mozambique Current

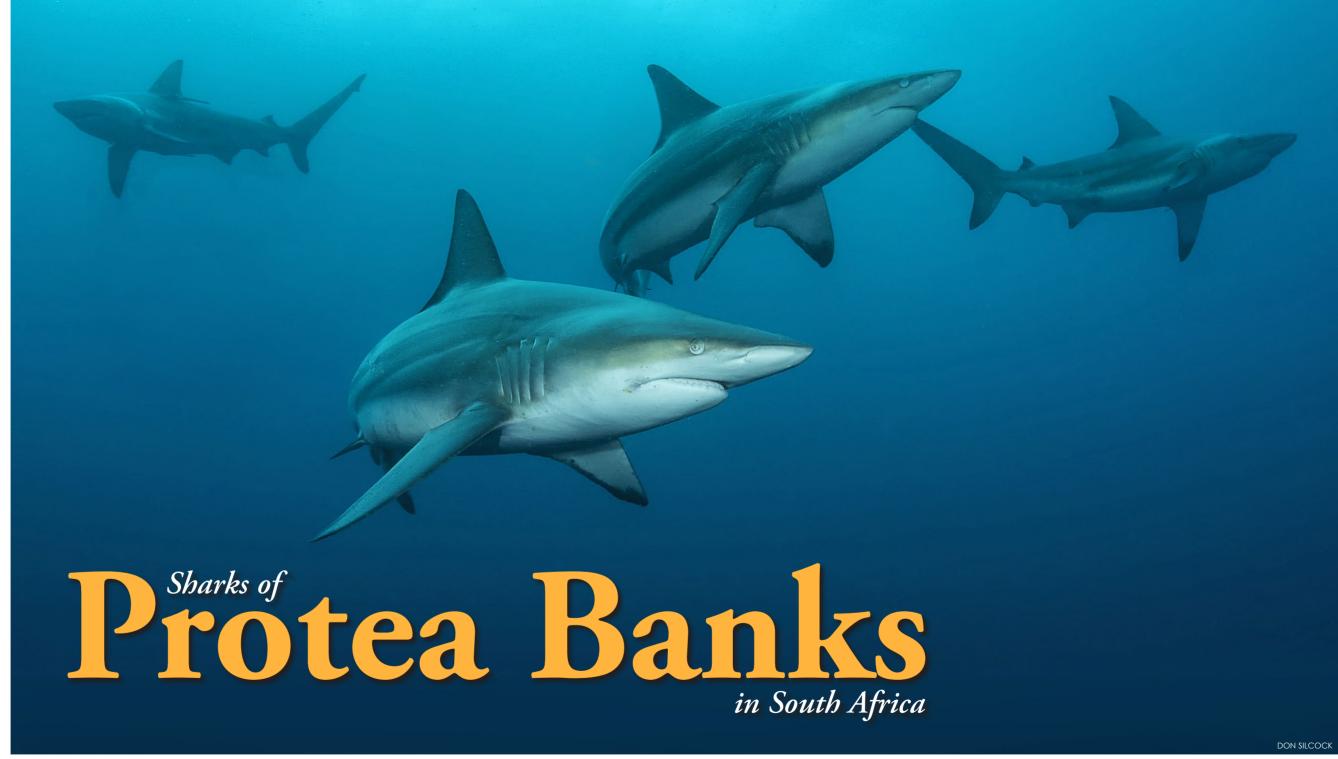
merges with the equally strong East Madagascar Current. From that tumultuous beginning, the Agulhas runs straight down the 2,000km long eastern coast of South Africa at surface speeds of up to 8m an hour, bringing with it warm Indian Ocean water rich with nutrients.

Where those waters touch off-

shore reef systems along the edge of the narrow South African continental shelf, they are the catalyst and lifeblood for some incredible ecosystems. And one of the very

richest of those ecosystems is the Protea Banks.

The Protea Banks
Located some 8m offshore from



(m)

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INDIAN OCEAN

SOUTH AFRICA

ing (above); Aerial view of the resort town of Margate located on the coast of the KwaZulu-Natal province in South Africa (right)

the seaside town of Margate in the KwaZulu-Natal province, the Protea Banks is a large submerged shoal, about 800m wide and 6km long. The average depth is around 30m, but some key locations are much deeper, so bottom times, air consumption and decompression limits are hardly abstract issues when diving there.

short but sloping South African continental shelf just before it plummets down into the 3,500m deep Natal Valley, creating an almost perfect aggregation point for the rich

marine life of the east coast.

It really is quite a place, but it must be said that it is adventurous divina in often quite challenging conditions—be-

cause what the Agulhas Current gives, it can also take away!

Sharks of the Protea Banks

Where the huge flow of water that is the Agulhas Current encounters shoals like the Protea Banks and nearby Aliwal, it produces complex eddies and

apex are the sharks of the Protea Banks. There are so many of them that virtually every dive is a shark dive, but the encounters vary in nature from random sightings to intense, in-your-face interactions on the baited dives. But all are in open water—there are no cages here.

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The shoal rises up from the

upwellings, rich with nutrients from the deep waters to the east. Adding to the already fertile brew coming down from the north and creating the perfect conditions for the spawning grounds and nurseries for fish.

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Thus, the foundation for the pyramid of marine life is created and towards its







Oceanic blacktip sharks

Oceanic blacktip sharks (Carcharhinus limbatus)—not to be confused with the smaller blacktip reef variety—are by far the most common sharks of the Protea Banks.

Although not a true pelagic shark like the oceanic whitetip shark, they spend a great deal of time hunting in the waters in and around the Protea Banks and often appear both during ascents to the surface and at the safety stops.

Stout, medium-sized sharks that grow to about 2.5m in length, oceanic blacktip sharks have a distinctive light band on their flanks that stands out against their bronze coloration and light underbelly, making them easy to identify. They typically feed on smaller sharks, rays, cuttlefish, lobster and bottom-

dwelling fish, but are infamous for stealing fishermen's catch and so are not exactly popular among the fishing community of Margate.

In general, they show very little aggression and seem wary of divers. But they are easily enticed by baiting and are the main attraction for the regular baited dives on the Protea Banks. In the presence of food, they are much less cautious and can become quite "sporty" around the bait box. Obviously, greater care needs to be taken at such times, but it makes for some great photo opportunities when they do come in really close!

Ragged-tooth sharks

Known as grey nurse sharks in Australia and sand tiger sharks in the United States, the *Carcharias*



Oceanic blacktip sharks with divers (above and right); Oceanic blacktip shark with remoras (top left)



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THIS PAGE: Ragged-tooth sharks, or "raggies" as they are called in South Africa, gather in the main cave at Northern Pinnacle; One has a hook with fishing line caught in its mouth (right)



taurus or "raggies," as they are called in South Africa, are also a regular feature of winter months at the Protea Banks. They gather there as part of their mating process, with the first males arriving around the end of April, and numbers steadily increasing through May and into June when the female raggies also appear—having migrated up from the Cape area. At its peak from mid-June to the end of July, there are literally hundreds of ragged-tooth sharks patrolling the Protea Banks.

Although primarily a bottom-dwelling shark, raggies can be encountered in mid-water and are said to steal fishermen's catches—just like oceanic blacktip sharks. They are also known to surface and gulp air into their stomachs, which they use as a pseudo-swim bladder to control buoyancy when hunting—a technique that allows them

to hover and approach their prey with great stealth.

Raggies are quite large sharks that grow to well over 3m in length and

are equipped with an impressive set of teeth, which are small(ish), needle-like and evolved to pierce, secure and hold rather than sever. They also have very powerful jaws that allow them to seize and hold on to their catch, which is then swallowed whole.

They hunt mainly at night, which means they are at their most active when we have no way of observing them. Instead, we encounter them during the day when they like to hang out in gutters, caves and overhangs to

shelter from prevailing currents and potential predators.

Observed this way, they seem completely docile and almost kind of dumb as they patrol slowly round and round in an apparently aimless fashion. But the reality is they are resting and have slowed their metabolism right down to conserve energy—basically, they are almost sleep-walking, or should that be sleep-swimming?

The best place to see the raggies at the Protea Banks are the two caves

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Divers with bull shark, or "Zambie," as it is called in South Africa (left and below); View of bull shark from above (bottom left)

Protea Banks

tually all year round, they are most common from November through to July. They take their name from Africa's fourth largest river, the Zambezi, where they have been seen over 1,000 miles from the coast. Bull sharks (Carcharhinus leucas)—their name in the rest of the world—are the only species of saltwater shark that can exist for long periods in freshwater.

Zambies are large and robustbodied sharks with distinctive broad, flat snouts; and their overall appearance, together with their small eyes and general demeanor, is why they are called "bulls" elsewhere. Their average

length is around 2.3m, but larger ones are not uncommon and the biggest captured was a 4m long female. Zambezi sharks are rated as the third most dangerous shark in Southern Africa, and as in other parts of the world, are thought to be responsible for most shallowwater attacks on swimmers and bathers.

At the Protea Banks, encounters with Zambies come in two flavours. First, there are the random ones on both the Northern and Southern Pinnacles. These are quite common but rarely are they close encounters as the area is rich in tung and the sharks seem

well fed—so they have no reason to come and check you out other than their curiosity.

The second type of encounter is on the baited dives where it is normal for five to 10 Zambies to gather some 15m below the bait box at a depth of around 25m. Often, they stay there, and if you go down to get closer, so do they. Before you know it, 40m is approachina!

But occasionally, they will come up, at which point the oceanic blacktip sharks will auickly fade into the background and then the show belongs to the Zambies. They really are an impressive, if

on the Northern Pinnacle. Referred to as the "first or main cave" and the "second cave," both have large openings, which makes entry and exit easy and safe. But they are deep at around 30m at the entrance and 35m in the cave, so bottom times are quite limited.

Spending time in those caves with the raggies is a really intriguing experience as space is somewhat limited, and they are, after all, quite large annimals. But they seem to simply ignore and avoid you, so the best technique is to try and position yourself in a spot where they will pass by—but allow them to come to you, as chasing them just does not work. Time in the caves is the key, but it is limited because of the depth, so a degree of luck is involved in hoping that a raggie or two will get used to you and come in really close.

Zambezi (bull) sharks

"Zambies," as they are known in South Africa, are also a regular feature of the Protea Banks. While they can be seen vir-





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THIS PAGE: Tiger sharks can grow to an average length of 4m or longer. With an impressive girth, they radiate power and strength as only apex predators can.

Protea Banks

specifically targeted. But because their jaws are so powerful, the end result is deadly.

As with the Zambezi sharks, inwater encounters with tiger sharks at the Protea Banks come in two distinct flavours: random ones at the bottom during the dive, and on the baited dives. The random encounters are exactly that, and their intensity is entirely at the discretion of the tiger sharks. They may come in close and check you out or simply ignore you. It is up to them, but typically, they will give you at least a cursory inspection, particularly so on the Northern Pinnacle as that seems to be a favourite spot for them.

On the baited dives, they are attracted by the scent of the bait box and patrol around it as if trying

to understand the source. They will often wander off and disappear into the blue in one direction and then reappear later from the opposite direction, having checked out what is happening in the broader area. This behaviour aligns with their position in the marine food chain as truly apex predators and compares interestingly with that of the blacktip sharks, which seem totally focused on the bait box and only that.

The tiger sharks have a formidable presence, exuding total confidence and mastery of their surrounding environment. Eyeballto-eveball encounters with them on the baited dives are incredible and an experience that will stay with you for many years.

Tiger sharks

through to early June, but sightings all year round are possible. Tiger sharks typically feed on fish and other sharks but are also well known for attacking turtles on the surface. Their large, extremely

powerful jaws are able to bite right through those tough shells.

It is their tendency for the stealthy but devastatingly destructive attacks from below that has probably earned tiger sharks their fearful reputation in South Africa. Such attacks on humans are more than likely mistaken identity, as opposed to

Combine that significant presence

with their reputation as the sec-

ond most dangerous shark in South

Africa, and it is easy to understand

why tiger sharks command so much

respect. The Protea Banks is thought to be a breeding and birthing area

for tiger sharks. The main season

to see them is from late February

somewhat intimidating, shark, which shows no fear or hesitation when Large and very impressive animals, tiger sharks (Galeocerdo cuvier) they do come close. The encouncompletely dominate the proceedter is clearly being conducted on their terms—very exciting stuff! ings when they appear for two reasons: their size and their reputation. Their average size is 4m, but larger ones are com-While that length, combined with their incredible stripes, gives them a substantial presence, it is their girth that impresses most. They simply radiate power and strength in a way that only apex predators can.

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Divers in a RIB heading to a dive site (right); School of hammerhead sharks (far right); Divers descending at Northern Pinnacle (below)



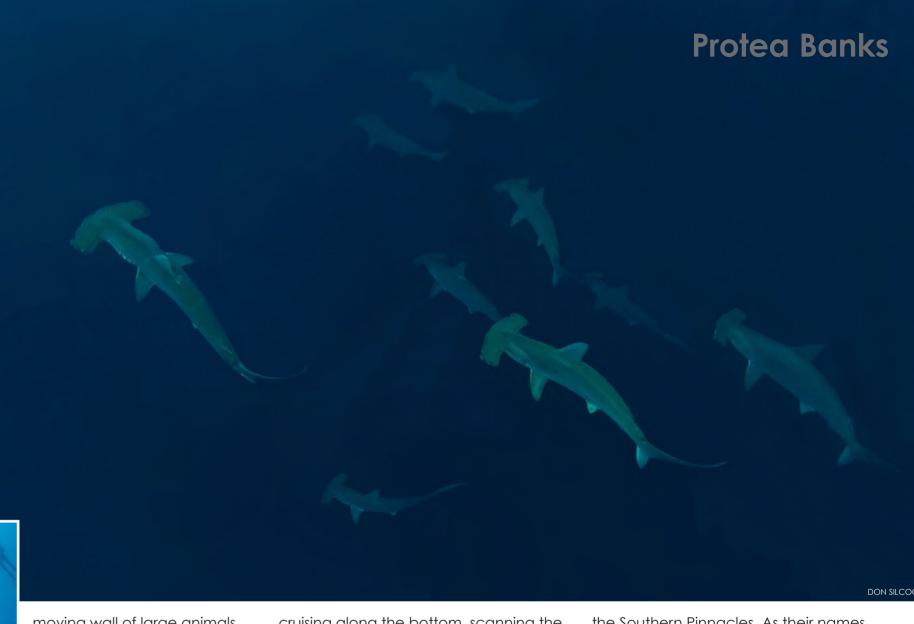
Hammerhead sharks

The Protea Banks also plays host to scalloped hammerhead (*Sphyrna lewini*) and great hammerhead (*Sphyrna mokarran*) sharks at various times of the year, although encounters with them are rarely the close, in-your-face ones. The scalloped hammerhead sharks gather

in huge schools that number in the hundreds, sometimes several hundred, from late October through to early May as part of their annual migration. But these notoriously shy animals are almost impossible to get close to.

Instead, you will see them in the distance, where they appear as almost a





moving wall of large animals. Other times, they will pass below you during ascents to the surface or on the safety stops—but again, while tantalisingly close, they are almost impossible to photograph. Interestingly, when really large aggregations of scalloped hammerheads are seen on the Protea Banks, it is believed they are exfoliating by rubbing up against one another as a great deal of slime is always present in the water.

Great hammerheads are also present around the same time but are most common during the months of March and April. Typically solitary animals that are usually quite shy around divers, they can often be seen

cruising along the bottom, scanning the reef floor for prey with their unique hammer-shaped heads. And, if you are lucky, they may be encountered (usually briefly) in mid-water, during the staged ascents to the surface.

Significant animals with an incredible presence because of their uniquely shaped and highly sensitive head, they sashay through the water towards you with total confidence. Anecdotally, it seems that the higher the number of great hammerhead sharks there are in the vicinity, the significantly lower the number of scalloped hammerheads there are.

Diving the Protea Banks

There are basically two areas where recreational diving can be done with safety at the Protea Banks—the Northern and

the Southern Pinnacles. As their names suggest, these are the highest peaks (and therefore the shallowest parts) of the large submerged shoal that forms the Protea Banks. However, even then, the minimum depth is around 30m, and some of the best things to see are at 36m.

The laws of physics are just that—laws. So, the huge volume of water that forms the Agulhas Current gathers speed as it passes over those pinnacles, which means one thing—increased water velocity and stronger currents. Diving in strong currents, in deep waters and in an offshore area—where the next landfall is Antarctica—is not something to consider lightly. If ever there was a place to listen carefully to the dive briefing and follow instructions, the Protea Banks is it.

The Southern Pinnacles are where you will do your first dive. Of the two pinna-

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cles, it is the safer and easier one to dive—so think of it as a check-out dive. Unlike the Northern Pinnacle, where there is a very specific location from which to start, the Southern Pinnacle is more of a straightforward drift dive. There is a well-established main route that takes in the best spots along the way. But there are a variety of things to see in general, as you drift along in the current, and sticking to that main route is not as important as it is on the Northern Pinnacle.

The Northern Pinnacle is the main and most adventurous part of the Protea Banks. In terms of both your diving and listening skills, it is where the rubber meets the road. The starting point is the first or main cave which, compared to the overall area of the pinnacle, is quite small. And, as the boat will be drifting along in currents that can reach 8km/hour, it is not the easiest place to find.

The key elements of success to

getting onto the first cave is ensuring the boat gets to exactly the right position, which is done using GPS to establish location and the strength of the current followed by a rapid negative entry and an equally fast descent, while not losing sight of the divernas-

ter and surface marker buoy. All of this is carefully explained at the comprehensive pre-launch briefing and then reinforced on arrival—hence, the listening skills. The diving skills come into play once in the water, but if you have listened, it will all go to plan.

Dive operators

There are two well-established



Shelly Beach-based dive operators who specialise in diving the Protea Banks: African Dive Adventures (afridive.com), run by Roland and Beulah Mauz; and Aqua Planet (aquaplanet.co.za), run by Kym Pollard. All my experience of diving the Protea Banks has been with African Dive Adventures, and I have nothing but praise for the

Don Silcock

Roland and Beulah have been diving the Protea Banks for over 20 years and know it better than anybody else. It is not easy taking people out to dive safely in deep water, with strong currents and lots of sharks. But they have refined their operation, together with all the behind-the-scenes logistics that support it, extremely well.

Concluding thoughts

The "Rainbow Nation" of South Africa is an incredibly diverse and interesting country with much to see and do on land. It also offers some tremendous diving that varies from the semi-tropical reefs of Sodwana Bay near the Mozambique border in the northeast to the great white shark cage diving around Cape Town. In between those extremes

Protea Banks

is the rich marine ecosystem of the Protea Banks and its remarkable shark population.

However, it has to be said that diving the Protea Banks is not for everyone. The conditions can be downright challenging, and you really do need to be a competent diver to make the most of what there is to see there. But by accepting those challenges and preparing properly, you will be richly rewarded with some exceptional encounters and truly adventurous diving.

Asia correspondent Don Silcock is based in Bali, Indonesia. For extensive location guides, articles and images on some of the best diving locations in the Indo-Pacific region, visit his website at: Indopacificimages.com.



way they conduct their operation. CLOCKWISE FROM TOP LEFT: Underwater photographer with oceanic blacktip shark; Diversater at Main Cave entrance at Northern Pinnacle; Bull shark with remoras; Dive boat picking up divers after a dive



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White sharks' annual migration has baffled scientists for years, not iust because it takes the sharks a month to get there but does not seem to possess food to support their diets.

Why do white sharks congregate in a remote patch of the Pacific?

Each year, hundreds of great white sharks from California and Mexico journey to a far-flung stretch of the Pacific Ocean dubbed the "White Shark Cafe," situated between Mexico's Baia California and Hawaii. This annual migration has baffled scientists for years, not just because it takes the sharks a month to get there but does not seem to possess food to support their diets.

1,200 miles east of Hawaii

Scientists now believe they may be closer to an answer. A joint expedition by Stanford University and the Monterey Bay Aquarium is focusing on a 160-mile-radius subtropical region approximately 1,200 nautical miles east of Hawaii. The area was essentially unknown to science until marine scientist Barbara Block of Stanford University's Hopkins Marine Station began attaching acoustic pinger tags to white sharks 14 years ago.

Each December, the acoustic tags would track a huge movement out to sea. Block discovered the sharks were leaving the West Coast to spend

spring and most of the summer in a patch of open ocean about the size of Colorado. She named it the White Shark Café, even though she wasn't sure whether the sharks went there for food or sex.

Tagged and tracked

Acoustic taas were attached to 36 local sharks, as well as satellite monitoring tags with locator beacons that were designed to pop off and float to the surface. Researchers then organized the month-long expedition in April 2018 on the research vessel Falkor to track down the tags. Data was obtained from 10 of the 22 tags that floated to the surface in what Block described as a "white shark treasure hunt".

Teeming with squid

Researchers discovered the area to be teeming with squid and small fish in a deep-water expanse known as "mid-water," positioned just above the deepest areas of the sea where there is complete darkness. They discovered the animals engaged

in "bounce dives" down to 1,400ft below the surface during the day and 650ft at night.

"The story of the white shark tells you that this area is vitally important in ways we never knew about," said Salvador Jorgensen, a research scientist at the Monterey Bay Aquarium. "They are telling us this incredible story about the mid-water, and there is this whole secret life that we need to know about . . . What we've learned through the progression of our research is that this mid-water layer is extremely important for white sharks, he added.

Researchers will not know whether the sharks were feeding, mating or doing both until the analyses are completed. "We now have a gold mine of data. We have doubled the current 20-year data set on white shark diving behaviors and environmental preferences in just three weeks," said Block. "It would help us better understand the persistence of this unique environment and why it attracts such large predators" ■



