

Paying the tax man can be a dangerous and unnerving experience for anyone. Even if you do keep your catch, just having a curious shark in the area may force you out of the water or at least hesitate before taking that next shot. But while spearfishers are experts on the behavior and identification of most fish in the sea, identifying sharks can be a different story.

Divers in Hawaii misidentify sharks all the time and it's no surprise. If you see them at all, it's usually as silhouettes on the edge of visibility. If they come close enough for a good look then you're usually more focused on protecting your kui than shark species identification. But correctly identifying your tax collector can give you valuable information about how dangerous the shark is, and how likely it is to get aggressive with you or your catch. It's also one more way to understand and appreciate your marine environment by educating yourself in an area where most people are lacking.

Sometimes identifying your shark is easy. Everyone knows the blunt snout, dark bars, and submarine size of a tiger shark when they see it. But we also have several species of brownish-gray, pointy-nosed sharks in Hawaii (known as Carcharhinids) that can be extremely difficult to tell apart if you don't know what to look for. The ones most commonly seen are probably the sandbar shark, blacktip shark, and Galapagos shark, and people tend to mistakenly refer to all of them as gray reef sharks or "grays."

Let's talk about gray reef sharks for a second. Do we have them in Hawaii? Yes. Are they common? Not at all, except in a few specific areas like Molokini crater and Ni'ihau. You've probably heard a lot about gray reef sharks around Oahu, but I have yet to find evidence of them being here. In the thousands of sharks killed during the shark control programs of the 1960's, not a single gray reef shark was caught in Oahu waters. I'm not saying it's impossible to see grays around Oahu, but if you see one, please take a picture and send it to me! In any event, unless they're talking about Molokini or Ni'ihau, most gray reef shark sightings you hear about are probably misidentifications.

So how can you accurately identify these sharks? General body color (gray, blue, brown) is a poor tool for identification because it can vary between individual sharks of the same species and with varying water conditions and depth. Size

can be a better clue in some cases. People are generally terrible at estimating size underwater, but spearfishers are much better than most. If the shark is bigger than six feet, you can usually rule out a gray reef shark right away. If it's closer to ten feet, it's most likely a Galapagos. Sandbar sharks generally max out around six or seven feet while blacktips can reach between eight and nine. Let's face it though: if the shark is bigger than you are, it's pretty hard to judge the difference between seven, eight, and nine feet, so let's talk about other identifying characteristics.

Of all the sharks we're talking about here, the gray reef shark is probably the easiest to identify. That's because it has a well-defined black margin on the trailing edge of its caudal (tail) fin that is nearly unmistakable. It often has very dark second dorsal and anal fins as well, and the trailing edge of the first dorsal fin is sometimes white. This is a fairly slender shark and doesn't get much over six feet long, but it has been known to attack divers. Gray reef sharks have been reported to perform a "threat display" that consists of mouth gaping, hunching their backs, and swimming erratically before attacking. This threat display isn't seen very often though, so don't expect a fair warning before these guys hit your float on your day-trip to Ni'ihau.

Growing slightly larger than the gray reef is the sandbar shark. Sandbars have no obvious

markings so the key to recognizing them is their fin size and placement. Sandbar sharks have a very tall first dorsal fin compared to the other sharks described here, and that dorsal fin is also further forward on the body. If you were to draw a line straight down from the origin of the dorsal fin, it would run through the middle of the pectoral fins. In other sharks that line would go through the trailing edge of the pectorals. Though sandbar sharks in other parts of the world are known to be on the shy side, Hawaiian sandbars appear to be less timid. A six foot female sandbar that we had tagged as part of a research project was killed with a bang stick in Moanalua Bay a few years ago. Apparently some guys were chumming for ono and she had picked up the scent and wouldn't leave them alone. So if you're ringing the dinner bell, this shark may come to the table.

When discussing the blacktip shark (*Carcharinus limbatus*) it's important to recognize that this is NOT the same species as the blacktip REEF shark (*Carcharinus melanopterus*). The blacktip REEF shark is smaller (six feet or less), has very obvious black fin tips, and is rarely seen anymore in Hawaii. The blacktip shark usually seen by divers gets much larger and often does not have obvious black tips on its fins.

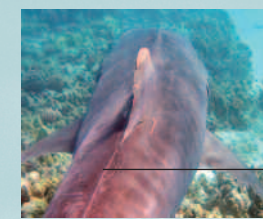
What? Blacktips don't have black tips? That's right. Adult blacktips in Hawaii usually have no visible black tips on their fins. Because of this, blacktips are frequently mistaken for sandbars, Galapagos, or (don't say it) "grays." The most recognizable characteristic on a blacktip is usually the well-defined white band on the flanks. This band looks like a peninsula of white that extends forward and up from the underside of the tail. Even though they aren't often recognized, blacktips are probably seen pretty frequently in Hawaii. These guys come into shallow water and can learn to associate the sound of a gun with a free meal (your catch - not you!). This species is thought to be responsible for a few attacks in Florida every year but mostly from accidental bites by young sharks.

Last but not least is the Galapagos shark. Smaller Galapagos can sometimes be confused for gray reef sharks because they may have a dark margin on the trailing edge of their caudal fin. However, this band is not as dark or clearly defined as the black band on the tail of a gray reef shark. Galapagos sharks usually have a more slender build than sandbars or blacktips and have longer pectoral fins, giving them more of an airplane-like appearance. They reach sizes of ten feet or more and have a very curious nature, which makes them more dangerous than the other sharks described here.

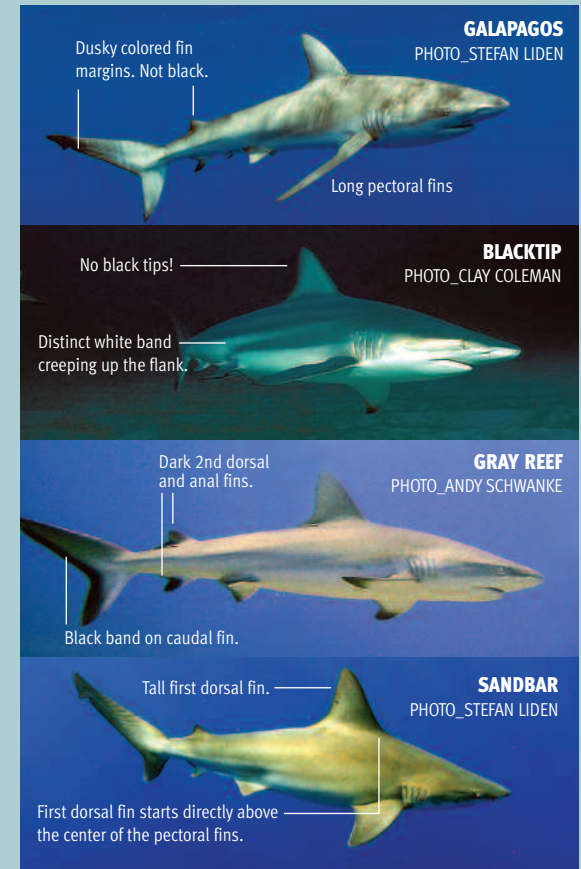
Finally, I'd like to mention a shark characteristic that is great for identification but can be

hard to see on a free-swimming shark. It's a small ridge that runs down the back of some sharks between their first and second dorsal fins. Not surprisingly, it's called an "interdorsal ridge," and you can see a good example of one on the back of the tiger shark in the photo below. (Note: if you have to get this close to know a tiger shark when you see one, you may want to consider shore-casting.) Galapagos and sandbar sharks have an interdorsal ridge, whereas gray reefs and blacktips do not. Unfortunately this can be a hard thing to see unless the shark is circling your fin tips.

I realize this is a lot to remember, so when you see a shark and blank out on everything you've read in this article, just try to memorize the shark's appearance so you can look it up later. Here's what to focus on. Size and shape: slender or deep-bodied? Fin coloration: do any of the fins have black bands or dark tips? Know which fins are which (pectorals, 1st dorsal, pelvics, 2nd dorsal, anal, and caudal or tail fin) so you'll have an easier time remembering what they looked like. Fin size and placement: does the first dorsal fin seem taller than it should be? Does it start above the middle of the pectoral fins? Are the pectoral fins long like airplane wings? Body coloration: Any conspicuous white bands on the flanks? Interdorsal ridge: can you see one? Finally, lift your head above the surface and look at the nearest land mass. Is it Molokini or Ni'ihau? If not, don't call it a "gray" unless you've got a camera and can prove it! **PAU**



TIGER PHOTO_NICK WHITNEY



Galapagos > 10 to 12 feet max

Trailing edge of tail fin, 2nd dorsal and anal fins get dusky, but not as black as gray reef. Slender shark with long pectoral fins.

Interdorsal ridge present.

Blacktip > 8.5 to 9 feet max

No dorsal fin markings, not even black tips! Though black fin tips are usually visible on young sharks. Conspicuous white stripe on flanks

No Interdorsal ridge

Gray Reef > 6 feet max

Very dark band on trailing edge of tail fin. 2nd dorsal and anal fins usually very dark as well. Trailing edge of first dorsal may be white. They are uncommon outside of Molokini and Ni'ihau and yet to be documented in Oahu waters.

No Interdorsal ridge

Sandbar > 6.5 to 7 feet max

Usually no fin markings. Very tall first dorsal fin that originates over the center of the pectoral fins.

Interdorsal ridge present.

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Identifying carcharhinid sharks in Hawaii

