

Sharks Have Some Of The Coolest Superpowers In The Animal Kingdom

Noah Plaue | Aug. 15, 2012, 6:10 PM |



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All this talk about [Shark Week](#) has us interested in these prehistoric destroyers, so we decided to see what exactly makes these killers so intriguing.

With some help from Professor Mahmood Shivji, Director of the Guy Harvey Research Institute and Save Our Seas Shark Center at Nova Southeastern University, we found out that sharks have some super abilities you would not be amiss at comparing to those of a comic book superhero.

From super speed to incredibly fast healing, the over 500 species of sharks truly deserve the fascination that we have for them.

However, Dr. Shivji points out that despite these superpowers and the perceived ferociousness of sharks, very few have attacked humans. On the contrary the fishing of sharks for their fins by humans has brought many species to the brink of extinction.

The power to emit light and glow.



A lantern shark

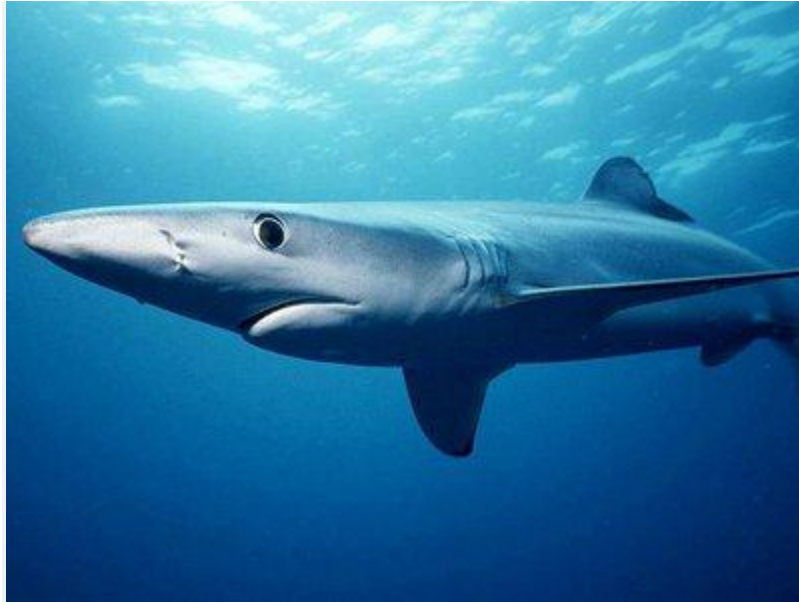
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Superpower: [Glowing bodies](#)

The pygmy shark has light-emitting organs that make its skin glow. This tiny shark only grows to about 8 inches and uses the light as a form of camouflage, lighting up its stomach to imitate the light that filters down through the ocean from the sun or moon above. Without the lights, its body would block this light, and that would enable predators to see it from below.

The lantern shark has a similar ability, but uses its 30-minute bursts of light to communicate.

The power to heal remarkably fast.



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Superpower: [Fast healing](#)

We tend to think of sharks as the ones giving out the damage, but they get injured too. So much so that they are evolved to be incredibly good at healing from wounds. Sharks have been observed to heal from serious external injuries extremely quickly, with major bites and gashes completely healing in just a couple of months.

One reason for this healing proficiency is that sharks constantly shed and replace parts of their bodies including their teeth and fin spines.

According to Dr. Shivji, the shark's ability to "heal very quickly from external wounds is remarkable."

The power of moving while sleeping.



[Wikipedia](#)

Superpower: The real sleep "walkers"

It is a pretty common myth that sharks don't sleep and as cool as that would be it's unfortunately not true. Sharks need rest like everyone else, but the things that sharks can do while sleeping are pretty amazing.

Some sharks must constantly keep moving, so oxygenated water is always moving over their gills, so even when their sleeping they glide through the water.

Other sharks can lie on the bottom while sleeping, but do some odd things as well. Some of these awesome zombie-sharks actually keep their eyes open while their asleep, which has prolonged the misconception that sharks never sleep, Shivji said.

The power of virgin birth.



Stonybrook University

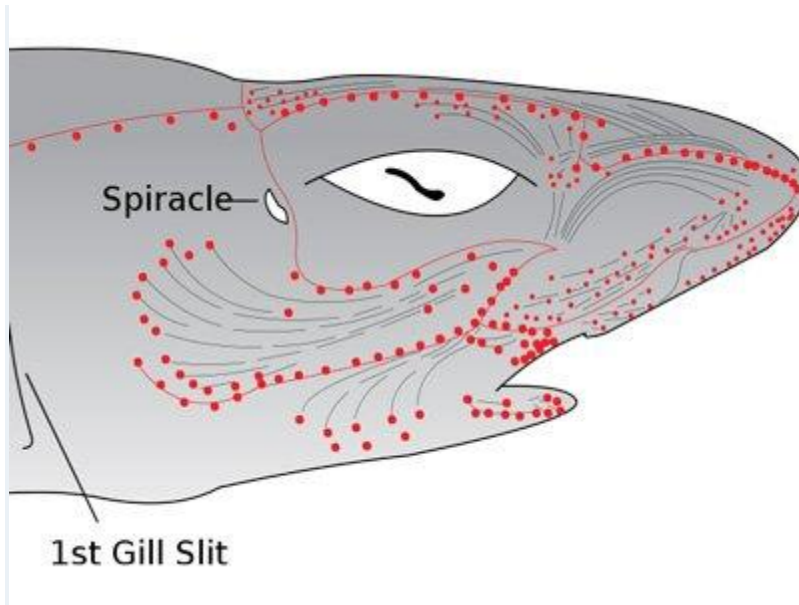
Superpower: The virgin birth

For the most part, sharks reproduce via the traditional, sex-involved approach, but that's not always the case.

Hammerheads and several other species of sharks have been seen to give birth without mating (this is most obvious in aquariums, where they don't have access to a mate). They do this through an asexual form of [reproduction known as parthenogenesis](#). In parthenogenesis, the female can use her own DNA to jumpstart her eggs to develop into baby sharks, instead of waiting around for the DNA deposit of a male.

Even sharks that do have sex have some pretty cool tricks up their sleeves, as some female sharks can actually store sperm from a sexual encounter with a male and use it later on to fertilize an egg.

The power of electromagnetic senses.



Ampullae of Lorenzini

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Superpower: [The sixth sense of electroreception](#)

Even if a shark can't see, hear or smell you, it can still track you down using its electroreception. All animals create electromagnetic fields (especially fish). Sharks has developed a special sense for these fields using sensing organs called Ampullae of Lorenzini found in their noses.

Dr. Shivji tells of sharks that use this extrasensory ability to hunt stingrays that hide beneath sediment on the ocean floor. The shark will rock its head back and forth to pick up the electromagnetic field of its prey — similar to how a man with a metal detector scans a beach — until they find a stingray, then chow down.

The power of night vision and armored eyes.



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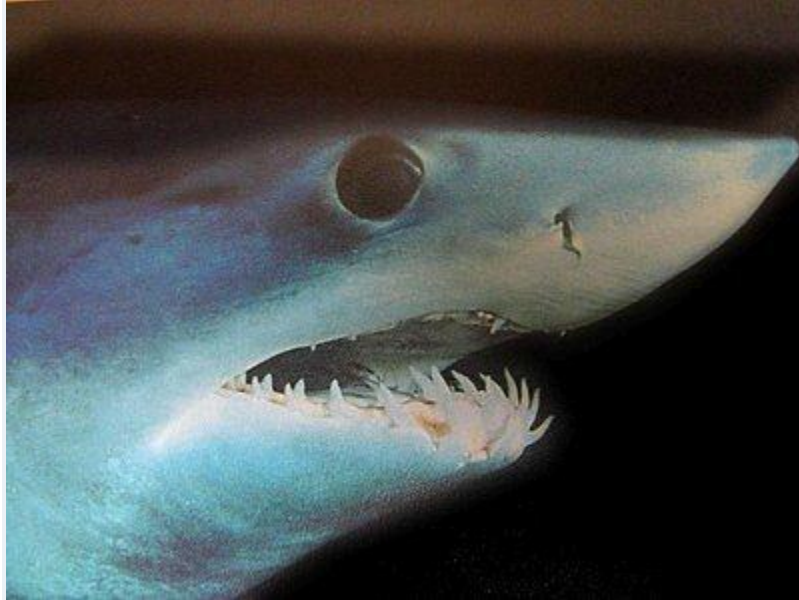
Superpower: Advanced sight and night vision

Sharks usually use all of their highly advanced senses to hunt prey, but [up close sharks mostly rely on their sight](#). Since the water in the ocean distorts the little light that reaches down there, sharks have developed special sight to be able to see in this dim, dark water.

Like cats, sharks have a kind of "night vision" that allows their eyes to get the most use out of the small amounts of light available. This system makes sharks 10 times more sensitive to light than humans.

Besides night vision, sharks can see in color and some sharks have what are essentially clear shields for their eyes, called a nictitating membrane, that protects the sharks eyes when it attacks.

The power of super smell.



Nare on a mako shark

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Superpower: Highly advanced smell

Sharks have a small opening on either side of their heads called [nares](#), which give sharks an extremely advanced sense of smell. Because there is a nare on each side of the head, most prominently in the hammerhead shark, sharks can smell a very wide area. They can smell in "stereo" — they can detect differences in the amount of smelly substances between their two nares, and understand that that means the source of the smell is off to one direction or the other.

A shark's sense of smell is particularly attuned to animal fluids and is extremely sensitive to blood from an injured animal. A shark's smell is so highly developed in this regard that it can smell one part blood in one million parts water.

The power to detect slight pressure changes and vibrations.



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Superpower: Sense pressure and vibrations

Sharks certainly have a ton of ways to figure out what's going on in the waters around them. Just below the skin of a shark is the [lateral line](#), which allows sharks to sense pressure changes.

This may seem like some useless information when an ocean's worth of water is pushing in on them from every side, but sharks use this ability to figure out where other fish, both predators and prey, are. The movement of these other animals creates underwater waves, which the sharks sense.

It is partially for this reason that a distressed fish that is flapping around a lot attracts sharks so fast.

The power of super cancer-immune skin.

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Superpower: [Jersey Shore skin](#)

When humans and even most fish are over-exposed to the sun's powerful rays they can fall victims to the dreaded growths and lesions of skin cancer. But not sharks, they just get more tan.

Scientists still don't fully understand the reason, but as far as anyone is able to tell sharks seem to be pretty much immune to skin cancer. Even intense ultra-violet light, 600 times stronger than normal failed to give sharks melanoma in the lab.

Instead, sharks just get really, really tan when exposed to the sun's rays. When a group of hammerheads were exposed to increased sun, their skin turned from a light tan color to dark brown. Sounds like this is one shark attribute that may have some people in New Jersey pretty jealous.

The power to swim at super high speeds.



A mako shark

YouTube screencap

Superpower: Super speed

The actual top speed of sharks has been up for debate for quite a long time, [with some past researchers speculating max speeds as high as 60 mph](#). This estimate is probably way too high, but even much more conservative estimates show that sharks can swim very, very fast in short intervals especially when attacking.

At their max, a great white shark can hit somewhere around 25 mph. Even more impressive, the mako shark, the undisputed speed king of the sharks, [can hit over 30 mph](#). This super-speed of these sharks enables another superpower, their ability to jump great heights clear out of the water.

Read more: <http://www.businessinsider.com/sharks-have-some-of-the-coolest-super-powers-in-the-animal-kingdom-2012-8?op=1#ixzz23nwCZHQs>