



Shark disco

By Michelle Wheeler

Biologists have been playing sounds, flashing lights and blowing bubbles to sharks in the ocean. But it isn't to start an awesome ocean party. It's to figure out what sharks hate, so we can scare them away from beaches and keep swimmers safe.

Do sharks like to disco?

Or, can flashing lights and sounds keep sharks away from swimmers?

Shark biologist Dr Ryan Kempster, from the University of Western Australia, spent two weeks on a field trip finding out. As well as using sounds, light and bubbles, Ryan and the other researchers tried putting chemicals in

the water and using electric fields. They did their tests from the beach and from a boat, and tried out their ideas on tiger sharks, hammerheads, bronze whalers, blacktip reef sharks and nurse sharks.

Humans have many senses – we can see, hear, smell, taste and feel the world around us. Ryan says sharks have at least seven senses! Sharks detect electric fields and sense movement and vibrations in the water. They can even detect magnetic fields. These different senses mean there are extra ways scientists can scare sharks from beaches.

Could flashing lights keep the blacktip reef shark away from swimmers?



To spot whether sounds scare away sharks, cameras and underwater speakers are taken to sea.



Lights

Ryan says sharks don't like things that change frequently or are unnatural to them. So the researchers tried using bright flashing lights at different frequencies and intensities to see if sharks would swim away. Ryan says the jury's still out on whether this bright idea will work.



Sounds

Scientists think sharks don't like killer whale noises, perhaps because killer whales have been known to eat sharks. So the researchers played killer whale sounds underwater to see if it would make the sharks swim away. They also tried playing sounds with changing frequencies and volumes to see if that would work. Will it work? In South Australia, tour operators actually play AC/DC music in the water to attract sharks to their boats!

Bubbles

Ryan says one of the reasons they wanted to test bubbles is because some people who work in aquariums have observed sharks avoiding bubbles in tanks. To a shark in the wild, bubbles should be something they're not used to. Ryan says he is hopeful bubbles might repel sharks because they affect lots of different senses. It's difficult to know how different types of sharks react to bubbles though, so the researchers want to do more tests in the lab.

Chemicals

There's some evidence that sharks will avoid the smell of dead sharks because it means there is danger nearby. If researchers can create chemicals similar to those given off by dead sharks, it might keep live ones away. The problem is that it's hard to know when a shark might be about to attack and when the chemical should be released.



Electric fields

We know that sharks can detect electric fields, using them to find prey and avoid predators. Scientists think that certain electric fields could be used to scare away sharks, but there's a chance that sharks could get used to them. Ryan says electric fields could perhaps be used together with another back-up repellent.

Work in progress

Plenty of field work has been conducted. Now the researchers need to look at their results and find out what worked. We hope to bring you the results in a future issue of *Scientriffic!*



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