

SUBMISSION TO THE SENATE INQUIRY INTO SHARK MITIGATION STRATEGIES

My name is Fred Pawle. I have for many years been the surfing writer for *The Australian*, but am making this submission as a private individual.

Two years ago, I became alarmed about the increasing number of shark attacks on surfers, divers, swimmers and other ocean users in Australia, and felt an obligation to research the reasons why these attacks were happening. In my investigations, I discovered a worrying lack of concern among shark researchers, politicians and bureaucrats towards these often tragic attacks, and this is what I would like to bring to the committee's attention.

My main findings are:

1. The official attack statistics are an understatement of the actual toll.

In July 2015, Damian Johnson, 46, was attacked by a great white and killed in front of his 20-year-old daughter while diving for scallops off Tasmania. The Australian Shark Attack File lists this and all other incidents in which the victim is hunting or collecting seafood as "provoked". It seems unlikely to me that the ASAF can make this claim with any conviction. How can anyone who did not witness a particular shark attack say for certain that the shark was "provoked"? And even if it was, why should it matter?

That same month, I asked a spokesman from the ASAF why it didn't include figures for disappearances at sea that are likely to have been caused by sharks. The response was that ASAF administrator John West "does not engage in speculation". Yet West *does* speculate about "provocation". Why is this?

It is common for reporters and the public to quote statistics only for "provoked" attacks. This is a dangerous understatement. It provides an inaccurate indication of the dangers of entering the water in Australia. It also conveniently assigns a certain amount of blame to the victim, which in some cases may be entirely unwarranted. This fits neatly with the prevailing attitude among officials, politicians and researchers: that the increasing number of people attacked by sharks should accept a large amount of the blame because they knew the risks. The ASAF site, like most government-funded websites, publications and marine research organisations, seems more concerned with arguing for the preservation of sharks than informing people about the real dangers that exist in Australian waters.

2. Even if the statistics were accurate, they would still not reflect the extent of this crisis.

Dave Pearson, co-founder of Bite Club, an association for victims of shark attacks and their relatives, once told me that about 100 people are directly affected by each attack. The list starts with the victim, then the rescuers, witnesses and official first responders. Many of these people suffer serious psychological effects for years. I recently met a hardened senior police officer who attended a fatal shark attack three years ago, and he was still visibly, seriously traumatised by the memory. The list then extends to the other people on the beach, the parents of kids who regularly go to that beach, friends who read about the victim in a newspaper and so on. But the ripple effect doesn't stop there. While in Ballina in November, I was stunned to see the beautiful beaches there deserted on a pleasant, sunny, spring day. It's not just surfers who are abandoning this hot spot of shark sightings and attacks. These beaches were once magnets for hundreds of tourists. The Dunes, a nearby resort that once catered to large school groups and young travellers, has had to redefine itself as a wedding venue. The losses incurred by its owners are significant. The local surf shop, after losing a large proportion of its revenue in the initial downturn, has modified its stock to focus on surf fashion instead of equipment. As a result, a generation of kids in the area (and all around our coastline) who would have otherwise been drawn to the healthy, happy sports of surfing or surf lifesaving are now more easily distracted by less salubrious pursuits. We are creating obstacles to what should be one of our greatest attractions. A recent survey by Tourism Australia found that beaches are our nation's most popular international drawcard, yet the image of our beaches is being tainted by frequent and horrific attacks. The reasons for allowing this to happen have in my opinion never been fully explained, which I will get to later.

3. Researchers show alarming disregard for human safety.

The key objective of the Great White Recovery Plan of 2002 was to increase the abundance of great whites off the Australian coastline. In accordance with the EPBC Act, it lists groups and organisations that “will be affected by the plan’s implementation”. These groups include “cage divers” (who have profited handsomely from this new tourist attraction, and have been commissioned by the authors of the plan to help in their subsequent research) and various fishing groups. Also included are “beach users”. To some of these “beach users”, being “affected by the plan’s implementation” has meant being violently killed or maimed. The closest the plan comes to mentioning the inevitably increasing dangers of entering Australian waters is a fleeting reference to “safe swimming guidelines”.

There have been 27 fatal shark attacks in Australia since the report was published, and many more non-fatal, the majority of them caused by great whites. Thirteen years later, in January 2015, one of the authors of the plan, the CSIRO’s Barry Bruce, elaborated on those “safe swimming guidelines”. Interviewed on the *Today Show* in the middle of a crisis in Newcastle, when an abundance of sharks closed the city’s beaches for 10 consecutive days, Bruce said the people of Newcastle needed to show great white sharks “respect”. By this, he meant they should stay out of the water. Had he made this clear when the plan was published in 2002, there might have been more resistance to it.

He is not alone in disregarding the consequences an increase in sharks would have on ocean users. In a TEDx talk in 2012, one of Bruce’s colleagues, Vic Peddemors, of the NSW Department of Primary Industries, joked that the recent fatalities of surfers in Western Australia had constituted a “bumper season”. I have asked Peddemors on several occasions if he regrets making this joke. He has never replied.

It would be unfair to suggest that these two gentlemen are exceptions in the shark research community. In my experience, almost every person engaged in this field of research seems more concerned about preserving these fish than they are of ensuring the safety of people entering the waters off Australia.

4. Most research is expensive, futile and can increase the likelihood of attacks.

The most extensive research into our shark population has been the tagging program. About 1000 sharks have been tagged in Australia by the CSIRO, NSW DPI, WA DoF, the Queensland government and other organisations. The purpose of this ongoing research is firstly to learn the migratory patterns of sharks, and secondly to warn ocean users of the presence of tagged sharks at popular beaches where live listening stations have been installed. However, a report by the WA Department of Fisheries last year found, after conducting one of the largest studies into shark movement in history, that the movements of great whites is “highly variable” and “not consistent”. Further, it said “it is unlikely that a greater period of data collection will generate an overall predictive model”. In other words, the information gathered from this research is mostly meaningless. Peddemors seemed to confirm this when he recently told the ABC: “The best way I can describe their movements is like if you drop a bag of marbles”. If that is so, why do we bother with this expensive, repetitive, futile research?

Worse, tagging can arguably make the ocean more dangerous for people. The acoustic tags used have been shown to be audible to seals and dolphins, but not to humans. This neatly symbolises to me the absurdity of many forms of shark research. If a tagged great white, tiger or bull shark enters a beach where there are swimmers, seals and dolphins, the only species that cannot hear that tag is the species responsible for placing it there in the first place.

Further, there are reasons to believe that tags are not benign to sharks. Most tags these days are surgically inserted. They emit regular beeps and are powered by batteries. Many satellite tags, which can be picked up anywhere on earth the shark breaches the ocean’s surface, have suspiciously disappeared soon after they have been attached. Researchers are strangely incurious about the possibly malign effects they inflict. They are supposed to be recording “natural” behaviour, yet there are reasons to imagine they are significantly altering the behaviour of both the sharks and their prey.

Most ocean users agree that the size and abundance of large sharks have increased all around Australia, in most places alarmingly so. Yet many researchers are oblivious to this, and are occasionally adamant that the opposite is true. University of WA marine biologist Ryan Kempster told me in July 2015 that there was “no documented evidence that these species (tigers, bulls and whites) are increasing in abundance”. Last year Southern Cross University marine biologist Daniel Bucher told me that “populations of large sharks on the east coast (including great whites) and around the world have declined”, and were yet to

rebound even 17 years after great whites were protected in Australia. Peddemors said last year that “it’s still going to be a while” before great whites experience “rapid growth”. Bruce published a paper last year declaring the east coast adult population was between 750 and 1200, but was unable to say whether this indicated the species’ population was rising. It alarms me that the consensus among regular ocean users is that shark abundance is increasing, yet the consensus among researchers tends to be to the contrary. It baffles me why this should be so.

5. Research is not being conducted into the crucial field of shark attacks.

A video, shot from above, showing a shark approaching a surfer from behind at Lighthouse Beach, Ballina, recently circulated on social media. The shark gets within two metres of the surfer, who is oblivious and still, and suddenly diverts. Last September, WA surfer Fraser Penman was sitting on his board at Injidup, near Margaret River, and was knocked into the air by a shark estimated to be 5m long. It snapped his surfboard, but then decided against repeating the attack. Pro surfer Mick Fanning was attacked live on television during a contest at Jeffreys Bay, South Africa, in 2015. His legrope was bitten clean through but he was otherwise unscathed. These incidents are not, as some researchers would like us to believe, evidence of large sharks not being interested in eating humans. Fatal attacks on Cameron Bayes (South Australia, 2000), Jarrod Stebhens (SA, 2005) and Ben Linden (Western Australia, 2013), among many others that were horrifyingly prolonged, prove that large sharks are not averse to humans as prey. The great unknown is: why was that surfer at Lighthouse, and Penman and Fanning, lucky, while Bayes, Stebhens, Linden and others were not? And why is there no research into this aspect of shark behaviour? If we must live with more sharks, as researchers repeatedly say we must, the least they could do is investigate the factors affecting the severity of attacks. Unlike most other research, this would generate information that is useful to the people most seriously affected.

6. There is a weird reverence towards sharks that other lower-profile threatened species are not lucky enough to enjoy.

Sharks have been described as majestic, awesome, noble, amazing, beautiful, “celebrities” (by the CSIRO, our formerly august scientific agency) and, in the case of a recent report by researcher Shanta Barley of the University of Western Australia, “guardians of biodiversity”. In *Great White* (2014), Australian author James Woodford described the species as a “work of art”. In his book *Shark: Peril in the Sea* (2009), Australian natural historian David Owen said some sharks have “proportionally larger brains than many of the so-called higher mammals”. Whether he was including himself among those mammals, Owen did not say. Neither did he wonder why these brainy sharks have failed to work out that the shiny bit sticking out of a piece of meat suspended beneath a buoy floating in the water off the Gold Coast might be a sharp hook that would get stuck in its mouth.

If people want to revere these fish, that is fine. It’s a free world. But too many researchers are, from my observations, drawn to this field of study not because they want to find a balance between ecology and safety, but because they are fascinated by sharks, and are driven by a passion to protect them. If that is their objective, again, that is fine, but they should do it at their own expense.

Compare all the fuss about sharks, including this Senate inquiry, to the almost complete absence of concern for the broad-headed snake. Unlike the great white, which exists off Africa and both coasts of the United States, the broad-headed snake is found in only one place: the Sydney basin. It is a venomous snake that once enjoyed living in rock crevices throughout what is now a thoroughly modern and growing city. The broad-headed snake is now endangered, and if Sydney continues to grow, this species’ numbers will continue to dwindle. Where is the outrage? The Facebook pages? The tweets abusing people for wanting to destroy the snake’s natural habitat? The predictions of environmental catastrophe? The outrage doesn’t exist for one very good reason: the outraged would be outraged at themselves. This is one of the fundamentals of environmental activism and left-wing whinging in general: always choose campaigns that do not apply to yourself. Arguably, the broad-headed snake is in more urgent need of help from well-meaning humans, but to campaign for such help would in many cases require the campaigners themselves to pay a price. It is far easier to achieve the sense of moral vanity that so many environmentalists crave when one’s pet protests involve sacrifices by other people, not oneself.

7. Australia's famous beach culture is diminishing.

During last summer I was lucky enough to spend time on both coasts of our great nation. At Mullaloo, in Perth's northern beaches, where swimmers and kayakers often used to swim or paddle a long way out to enjoy the reefs and marine environment, people were conspicuously staying close to shore. The annual Rottneest swim notwithstanding, few people venture further than 20m from the shore in Perth these days. This is a sad consequence of the undeniable proliferation of large, dangerous sharks at beaches that were once a hive of activity and central to the city's image and culture.

Two weeks later I was on the Gold Coast, where nets and drumlines have been protecting ocean lovers for decades, and the contrast was stark. Swimmers, surfers, lifesavers and kayakers enjoyed the ocean uninhibited by the fear of a sudden, life-threatening attack. We were once known for this healthy, active lifestyle, but the sad truth now is that there are long stretches of our glorious coastline where people are afraid to swim, dive or surf. To many environmentalists, this is the price we must pay for having a marine ecology where "human intervention" is minimal. It's curious that these environmentalists do not feel the same way about the various species threatened or endangered by the urban sprawls in which they themselves live.

8. The more complex or expensive a mitigation strategy, the less effective it is likely to be.

Last time I was at Lennox Beach Surf Lifesaving Club, in November, there was a sign near the pathway to the beach that would be hilarious if it didn't also reflect monumentally poor judgment and expense. The sign warned of a "Navigation and bathing hazard", which is a euphemism for large submerged concrete blocks that could seriously injure swimmers or surfers. The blocks were left over from a failed attempt to install a protective barrier net around a section of the beach. A similar barrier was attempted at nearby Lighthouse Beach, despite adamant advice from local surfers that it would never work, and cost \$576,000 before it too was abandoned (I had to obtain this figure through Freedom of Information). I found it ironic that the DPI's attempt to make the beach at Lennox safer had actually made it more dangerous. Taxpayers paid for this, but that is only a drop in the ocean, to coin a phrase. Australian taxpayers have coughed up more than \$70 million for shark research and mitigation strategies in the past few years. The return on that investment is negligible. Meanwhile, survivors of shark attacks often need to hold fundraisers to buy prosthetic limbs. This contrast is particularly pertinent in the case of Shaun Pollard, who was attacked by two sharks at Esperance in 2014, one of which had previously been tagged by the WA Department of Fisheries. This is yet another illustration of Australian officialdom's regrettable priorities.

Similar conclusions can be made regarding other mitigation strategies, such as Shark Shield, a commercial product enthusiastically endorsed by Peddemors despite its unproven effectiveness against sharks in attack mode; magnets that supposedly deter sharks; the Clever Buoy sonar detection system, which after three government-funded trials still doesn't work properly; and expensive aerial and drone patrols, which are useful on the day, but do nothing to diminish the long-term effects of shark proliferation.

As Queensland has proven, nets and drumlines are an effective and cheap way of protecting people while causing minimal disruption to the marine environment. The fact that there is no concerted push at any government level for the introduction of nets and drumlines around Australia is a sad reflection of our politicians, who regard appeasement to green interests more important than the lives and limbs of some constituents.

9. We still don't know why all these risks and attacks are necessary.

Researchers are seemingly reluctant to arrive at an estimate of Australia's great white population. So how do we know they are even in crisis? I have asked two federal environment ministers, and several leading researchers, when, if ever, the protection of great whites might be lifted. So far I have had not a single reply. Why is this? Do they envisage the protection will continue forever? Why can't the people who use Australia's beaches, and the businesses that cater to them, be given some reassurance that this burgeoning shark population will one day level out? We are often told that sharks are the "apex predator" of the ocean, but the WA DoF report last year found that the behaviour of this predator is essentially random. So what happens to a marine location that is visited by a great white once, then not again for years or decades? Does the marine environment collapse, as we are often told it will, or does it adapt,

as Charles Darwin said it would more than 150 years ago? Did the marine environment collapse when the megalodon became extinct three million years ago, or did other species, including great whites, simply fill the vacuum? I am not proposing the extinction of a species, I am simply questioning the wisdom of sacrificing one of the greatest aspects of life in Australia for the sake of several large, dangerous shark species being able to inhabit our beaches. The Queensland marine ecology has not collapsed as a result of more than 50 years of nets and drumlines. Why can't these relatively cheap, effective protective measures be implemented around the country?

Recommendations

1. The immediate lifting of protection of great whites, to be replaced by a managed fishing program to ensure against extinction or marine degradation.
2. The reintroduction of licensed shark fishing in northern NSW and other selected ports along the coastline.
3. The immediate cessation of all shark tagging, to be revived only in instances when researchers can propose specific objectives and benefits.
4. The introduction of nets and drumlines at all popular beaches around our coastline.
5. The establishment of a commissioner or officer to oversee, for now, the conflicting interests of shark conservation and beach safety. Policy these days is too heavily influenced by conservationists, who seem unable to explain the benefits of their programs, and are seemingly preoccupied with the welfare of sharks, not people.
6. The establishment of a fund to help survivors and relatives of people killed in attacks since the protection of great whites was introduced in 1999. The fund would help finance much needed prosthetic limbs, rehabilitation, and counselling.