

**Submission
No 67**

MANAGEMENT OF SHARKS IN NEW SOUTH WALES WATERS

Name: Name Suppressed
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Partially Confidential

Members of the committee,

I would like to submit my thoughts to the Inquiry regarding the management of sharks in New South Wales waters. In particular I would like to address three specific areas that I believe do not currently have enough emphasis placed on them, and which are vital to the protection of those who pursue ocean-based recreational activities. These are public education, the reluctance of councils to close beaches when there are exceptional conditions present that increase the probability of sharks being present, and the use of collected scientific data. These ideas are to be considered in conjunction with those of others who propose sensible measures. I would also like to preface my comments by saying that while many of the examples I use give reference to surfing, for no other reason that most recent reported interactions with sharks have involved surfers, the ideas presented are intended to include all ocean-based recreational activities.

After reading many news reports over the past twelve months regarding human-shark interactions, it has become apparent that many ocean-goers, and especially surfers, do not appear to be adequately educated in identifying conditions that are likely to increase the risk of an interaction with a shark.

The media recently reported an encounter at North Shelley Beach on the Central Coast that demonstrates that some education and common sense could have entirely prevented this incident. Two separate articles from unrelated media organisation provide the following information. Italicised comments are my own to illustrate that it was absolutely foreseeable that the likelihood of a shark encounter was increased with the combination of prevailing conditions:

ABC News [1]

- The person involved was surfing at 6:15am on 8 September.

Sunrise at Shelly Beach on 8 September, 2015 was at 6:03am^[2]. With the sun just above the horizon at the time of the encounter, conditions for predatory behaviour by fish (including sharks) are optimal as they are less likely to be silhouetted against the surface of the water while hunting than would be the case later in the day.

- The person involved is quoted as saying that “Any child could be swimming in the gutter.”

At 6:10am the tide was at a height of 1.11m at Shelley Beach [3], having receded from a maximum high tide depth of 1.2m. Every beach fisherman is aware that gutters are prime fish holding locations and toward the top of the tide is the most productive time to fish these areas. Many land-based shark fishermen specifically target sharks in these gutters, especially

¹ Simkin, Emma. (2015, September 8). “Shark attack: NSW surfer bitten at North Shelly Beach says it could have 'easily taken my hand or arm'”. ABC News Website. <http://www.abc.net.au/news/2015-09-08/man-injured-in-nsw-central-coast-shark-attack/6757008>. Accessed 20 October, 2015.

² Willy Weather website. Sunrise/Sunset page. <http://sunrisesunset.willyweather.com.au/nsw/central-coast/shelly-beach.html>. Accessed 20 October, 2015.

³ Willy Weather website. Tide Times and Heights page. <http://tides.willyweather.com.au/nsw/central-coast/shelly-beach.html>. Accessed 20 October, 2015.

in periods of low light.

- A fellow surfer who was present at the time is quoted as saying, “a large seal and a lot of bait fish had recently been in the same area the 42-year-old man was attacked,” and “We've had a rather large seal out in the surf with us for the last month or so, so there's obviously a lot of bait fish around and the seal was there this morning at the same place where the shark attacked Justin.”

Seals are a favoured food source for Great White Sharks. For someone to enter the water in the place where one had been seen that morning, is an invitation for a shark encounter. Given the low light conditions, a surfer lying on a board presents a silhouette that is comparable in size and shape to a large seal.

Although neither article quoted provides a description of the particular shark, schools of bait fish are well known to attract sharks, either as a source of prey, or because they tend to attract mesopredators that sharks feed on.

Sydney Morning Herald [4] provides the following quotes

- The article states that the person involved “was surfing at North Shelly Beach about 6.15am when he was bitten about four metres from the shore,” and “Trevor Roberts, Wyong Shire Council's lifeguard co-ordinator, said Mr Daniels may have paddled onto the top of the shark.”

To not see a shark between 6 feet to 2 metres long four metres from shore supports the above argument that the light conditions at the time of the incident were favourable for the feeding behaviour of predatory fishlife.

That the person involved is thought to have “paddled onto the top of the shark” firstly supports the argument that gutters close to shore a natural habitat for feeding sharks, and secondly that the shark did not actively pursue the surfer. It is much more likely that the shark was suddenly disturbed as the surfer paddled through its feeding ground.

- “Surf Life Saving NSW and Wyong Shire Council lifeguards have closed Shelly Beach, North Shelly Beach and Toowoan Bay beaches for 24 hours following the incident.”

*When all the previous mentioned points are considered collectively, the decision to close the beach for 24 hours **after** an encounter with a shark was reported can only be seen as negligent. This reluctance to close beaches until a shark sighting or encounter has been reported when a multitude of factors combine to increase risk to the public is further demonstrated in the decision to close Birubi Beach at Port Stephens on 4 October 2015 only after two sharks were sighted when “the water off Birubi Beach was “so thick with salmon”*

⁴ Levy, Megan. (2015, September 8). “Surfer bitten at North Shelly Beach on NSW Central Coast says he's lucky he still has his arm”. *Sydney Morning Herald*. <http://www.smh.com.au/nsw/shark-knocks-surfer-off-board-at-shelly-beach-on-nsw-central-coast-20150907-gjhaen.html>. Accessed 20 October, 2015.

that surfers were hitting them with their fingers while paddling.”[5]Birubi Beach is right in the middle of a Great White Shark nursery area.

Another media report on October 6, 2015 reports a shark sighting at the very same beach. One surfer who was interviewed is quoted as saying, “I looked over and I saw two of them about 3m from me; I think they were after the baitfish.” [6]

So frequently media reports describing human-shark interaction depict the person involved as being consciously hunted by the shark. Some media organisations are more sensational in their reportage than others. The statistics provided by the Australian Shark Attack Files (ASAF) show this not to be the case. Last year, the ASAF records 23 encounters between sharks and humans in Australian waters. Of these, 12 were provoked attacks, while 11 were unprovoked. [7] The ASAF describes an attack as being unprovoked where “a person is not engaged in provocative activities and a determined attempt is made by a shark to bite or harass a person.” [8] By any reasonable measure, anyone who enters the ocean during periods when large schools of bait fish are being preyed upon by predatory fish must be seen as engaging in a provocative activity.

While discussing the role of the media, I would like to mention that articles reporting encounters with or sightings of sharks are, with few exceptions, written in a manner so filled with emotionally charged adjectives and verbs that their sole purpose appears to be inspiring mass fear in the public, not impartially describing facts. Titles such as “Data shows sharks’ deadly game of tag” [9] and descriptions in the body of articles, such as “shark-infested” and “SHARKS lurking” are entirely erroneous. Sharks don’t play tag. They cannot “infest” waters; it is their natural habitat. Sharks don’t “lurk” or wait in hiding for humans to come along. Due to their physiology they must keep moving simply to stay alive. I would argue that the media has played an even larger role in the increasing reluctance of the public to enter NSW waters, than the sharks have played themselves.

I would suggest to the committee that the following educational services be made considered to provide ocean users with the knowledge they need to make informed decisions when to enter the water, when to either avoid it or participate in their activities at another location.

⁵ “Birubi Beach shut after report of shark sighting”. *Newcastle Herald*. 4 October, 2015. <http://www.theherald.com.au/story/3400675/birubi-beach-shut-after-shark-sighting/>. Accessed 20 October 2015.

⁶ Smith, Errol and Stubbs, Catherine. [2015, October 6]. “‘Everything went crazy’: Surfers spot two sharks at North Shelly Beach”, *The Daily Telegraph*. <http://www.dailytelegraph.com.au/newslocal/central-coast/everything-went-crazy-surfers-spot-two-sharks-at-north-shelly-beach/story-fngr8h0p-1227557465921> . Accessed October 23, 2015.

⁷ Taronga Conservation Society Australia. “FAQ”. <https://taronga.org.au/conservation/conservation-science-research/australian-shark-attack-file/faqs>. Accessed October 23, 2015.

⁸ Taronga Conservation Society Australia. “Australian Shark Attack File Annual Report Summary for 2014”. <https://taronga.org.au/conservation/conservation-science-research/australian-shark-attack-file/2014>. Accessed October 23, 2015.

⁹ “Data shows sharks’ deadly game of tag” [2017, 27 September] *The Daily Telegraph*. <http://www.dailytelegraph.com.au/news/nsw/sharks-tracking-data-shows-killers-deadly-game-of-tag-on-the-nsw-north-coast/story-fni0cx12-1227546226965>.

- Increased communication to the public about the availability of the NSW Government’s Shark Smart brochure.[10]
- Mandatory shark awareness courses at all NSW surf life saving clubs, surf clubs, ocean swimming clubs, etc.
- Elements of this education may include:
 - Beach goers being ultimately responsible for both their choices and actions.
 - Conditions that are likely to increase the presence of sharks in an area.
 - Emphasizing to participants that surfing or swimming in conditions such as those I described earlier should be considered as provoking activities.
 - Shark identification.
 - First aid for shark bites.
 - Information specific to particular recreational pastimes, such as surfing, swimming, scuba diving, etc.
- The provision of shark awareness pamphlets to retailers that service ocean based activities, and that these pamphlets are mandatorily distributed when a purchase is made.
- Public announcements via radio, television, social media and smart phone apps when situations, and signs on or near beaches that warn the public when conditions are present that have a strong risk of increasing the activity of sharks to an area, such as “water so thick with salmon that surfers are hitting them with their hands.” If members of the public choose to enter the water after becoming aware of these warnings, then it must be understood that any interaction with a shark is a provoking action.
- Update the NSW Shark Smart brochure to include advice not to swim when seals are present.
- Update the NSW Shark Smart brochure to include information about species of shark found in NSW, or distribute the “Identifying sharks and rays” brochure.[11] Alternatively, provide and promote a shark identification document similar to “Field identification guide to Western Australian Sharks and Shark-like Rays” [12]
- Cease assuring the public that nets deployed under the Shark Meshing Program are effective at protecting beach users. The Fisheries Scientific Committee criticised the annual reports on the Shark Meshing Program published by the NSW Department of Primary Industries every year from 2010 until 2013, since the inception of the Joint Management Agreement in 2009 for stating the netting program is effective at protecting bathers, on the grounds that there is no scientific evidence to support the claim.[13]

¹⁰ NSW Department of Primary Industries. “Shark Smart Brochure”.
http://www.dpi.nsw.gov.au/data/assets/pdf_file/0017/304415/SharkSmart-brochure.pdf. Accessed 20 October 2015

¹¹ NSW Department of Primary Industries. “Identifying sharks and rays”
http://www.dpi.nsw.gov.au/data/assets/pdf_file/0004/264775/Identifying-sharks-and-rays.pdf. Accessed 20 October 2015

¹² R. McAuley, D. Newbound, R. Ashworth. “Field identification guide to Western Australian Sharks and Shark-like Rays” Western Australian Government Department of Fisheries.
http://www.fish.wa.gov.au/documents/occasional_publications/fop001.pdf. Accessed 20 October 2015

¹³ Annual performance reports for the NSW Shark Meshing Program are available from the NSW Department of Primary Industries website at <http://www.dpi.nsw.gov.au/fisheries/info/sharks/meshing>.

- Improved recording of human-shark interactions, such as is used by the Shark Research Committee in the USA. Their website provides a reporting form for such interactions. [14]
- Using this data to obtain meaningful information that can be used to better inform the public.
- Improved reporting of information obtained from tagging programs. For example, when shark alert systems are triggered by a tagged shark, identification of individuals to determine the number of unique animals in an area rather than the total number of signal hits.

¹⁴ Collier, Ralph S. "Shark Attack Form". Shark Research Committee.
http://www.sharkresearchcommittee.com/form_attack.htm. Accessed 20 October 2015. See also "Pacific Coast Shark News 2015" on the same website for how this data is collated into a human readable form.
http://www.sharkresearchcommittee.com/pacific_coast_shark_news.htm.