

Australian Shark Attack File
Annual Report Summary for 2019 (DRAFT)

The Australian Shark Attack File (ASAF) investigated 23 reported incidents of shark-human interaction in 2019.

Upon review, 17 of these incidents represent confirmed cases of unprovoked shark attacks.

Australian Shark Encounter Statistics for 2019:

State	Unprovoked Cases Recorded	Fatal	Injured	Uninjured
NSW	7	0	5	2
QLD	8	0	7	1
SA	0	0	0	0
WA	2	0	2	0
VIC	0	0	0	0
TAS	0	0	0	0
NT	0	0	0	0
Total - Unprovoked	17	0	14	3
Total - Provoked	6	0	3	3
Total - All Cases	23	0	17	6

An 'unprovoked' encounter between a human and a shark is defined as an incident where a shark is in its natural habitat and has made a determined attempt to bite a human without any human provocation. A 'provoked' encounter occurs when a human attracts or initiates physical contact with a shark, e.g. a diver injured after grabbing a shark, interactions with spearfishermen while spearing fish, commercial diving while collecting aquatic animals, someone that steps on a shark, etc. A fisherman bitten while removing a captured shark from the water is not a shark attack. The 'uninjured' category usually represents a bump or bite to a surfboard or Kayak where the person was not injured.

Activities and Injuries to Victims: QLD recorded eight cases and NSW recorded seven. WA recorded two unprovoked shark encounters. There were seven unprovoked cases involving encounters with surfboard riders, four cases snorkelling, five case involving a swimmer and 1 case wading in shallow water. There were no fatalities recorded. In three cases there was no injury to the victim recorded (these cases involved a bump or bite to surfboards or kayaks).

Species of sharks involved in attacks: White sharks were identified as being involved in four cases involving a surfboard rider. Two case involved a Wobbegong, four cases involved a Whaler species and 3 cases the species were unknown. Other species involved in single encounters included a Reef Shark, Bull Shark, Grey Nurse Shark and a Lemon Shark.

Time of the year attacks occurred (Provoked and Unprovoked): One incident was recorded for the months of Jan, March, May, June, Sept and Nov. Two Incidents were recorded in Feb and July, three in Dec and four in October. Eight unprovoked incidents occurred in the warmer months and nine incidents occurred in cooler months.

Average number of unprovoked shark attacks: The average number of unprovoked shark attacks varies each year with the average for the last decade being 15 unprovoked cases per year.

The figures for Australian shark bite injuries and fatalities remain very small in comparison to fatalities and injuries occurring while undertaking other recreational water activities at the 11,900 (approx) beaches around Australia's 35,000+km coastline (eg, drowning at beaches, harbours and rivers was 249 in the 2017/2018 season).

Circumstances affecting shark / human interactions:

The number of shark-human interactions occurring over the last few decades closely correlates with human population increases and the increasing amount of time people spend in the sharks' environment. As Australia's population continues to increase and interest in aquatic recreation rises, it would realistically be expected that there would be an increase in the number of shark encounters even though yearly averages may rise and fall. Unfortunately, the number of water users over time is not recorded and so is difficult to directly test against shark encounter.

Year-to-year variability in local economic, social, meteorological, oceanographic conditions and fishing pressure significantly influence the local abundance of humans and sharks in the water and, consequently the chance of encounters. As a result, short-term trends in the number of shark encounters - up or down - must be viewed with caution. The ASAF suggests trends over longer periods (e.g. by decade) are a more accurate measure rather than assigning significance to year-to-year variability.

Other influences that can affect yearly shark / human interaction are surfing and swimming conditions, use of wetsuits in cooler months (allowing longer periods in the water throughout the year), increasingly use of isolated locations, and occurrence of large schools of fish (fish schools attract sharks and other predators to an area). Media coverage of a recent shark attack event may reduce the participation in water activities. Fishing activities may attract sharks or reduced shark numbers from targeted shark fishing (eg finning). Shark numbers may also be reduced through capture in swimmer protection nets.

There is an increasing public awareness around water safety and shark behaviour that may also help to reduce interaction.

Precautions to minimise risk:

While more people are going into the water more often and staying longer, people may also be getting smarter about reducing their risk of encountering a shark and staying safe at the beach. There are a number of Shark Smart public education programs (<http://www.dpi.nsw.gov.au/fisheries/info/sharksmart>) issued by State and Federal Governments which offer information on shark behaviour and risk reduction. Several organisations such as the Australian Water Safety Council and Surf Life Saving Australia also have safety awareness programs.

The Australian Shark Attack File has a number of "**do's and don'ts**" that people should consider when planning their day at the beach or undertaking other water related activities. These considerations will assist in staying safe and will help reduce the risk of shark / human interactions. These considerations include:

- Swim at beaches patrolled by Surf Life Savers (they are there to keep an eye on your safety, to look for signs of danger and to assist if you get into trouble).
- Do not swim, dive or surf where dangerous sharks are known to congregate.
- Always swim, dive or surf with other people (the mere presence of a companion may deter a potential encounter and your companion can assist you if you get into trouble).
- Do not swim in dirty or turbid water (there is little chance of seeing a shark in these conditions).
- Avoid swimming at dusk, dawn or at night (some predatory sharks are active during these times and in low light conditions one may not be able to see an approaching shark).
- Avoid swimming well offshore, near deep channels or along drop-offs to deeper water (sharks are more likely to inhabit the deeper water).
- Avoid entering the ocean near a river mouth, especially after a rainstorm (rain can wash food items into the sea that might attract fish and sharks).
- If schooling fish congregate in large numbers, leave the water (sharks can be feeding on the baitfish schools).

- Be careful wading through shallow water or kelp beds as Wobbegong sharks are highly camouflaged and known to hide amongst the kelp and one could easily step on these sharks without knowing they were there.
- Do not swim near people fishing or spear fishing (these activities can attract sharks).
- Dolphins in the area do not indicate the absence of sharks (dolphins and sharks sometimes feed together and some larger sharks feed on dolphins).
- Kayakers should raft up together if a large shark is seen in the area (this makes for a larger object that a shark may not be interested in).
- Do not swim with pets and domestic animals (sharks can be attracted to the disturbance that non-aquatic animals make in the water).
- Look carefully before jumping into the water from a boat or wharf (people have jumped on top of sharks).
- Wearing shiny jewellery can reflect light that resembles the sheen of fish scales (sharks can be attracted to the reflected light).
- If a shark is sighted in the area leave the water as quickly and calmly as possible.

The ASAF has developed important cooperative relationships with all Australian State Fisheries, shark research scientists and Surf Lifesaving organisations around the country, leading to increased documentation of encounters from all regions of Australia over the past 40 years. The ASAF shares data on shark encounters with the International Shark Attack File (ISAF) held at the Florida Museum of Natural History, which also reports annually on the global number of interactions. For additional information on sharks and worldwide shark encounters, visit the ISAF web site at

<http://www.flmnh.ufl.edu/fish/Sharks/sharks.htm>

Further information can be found on the ASAF web pages including updated Australian shark encounter statistics and educational material about shark behaviour and conservation. For more information, please visit the Taronga Conservation Society Australia (TCSA) web site at :

<http://www.taronga.org.au/animals-conservation/conservation-science/australian-shark-attack-file/latest-figures>

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